

DOMINION OF CANADA

ANNUAL REPORT

OF THE

DEPARTMENT OF RAILWAYS AND CANALS

FOR THE FISCAL YEAR FROM APRIL 1, 1912, TO MARCH 31, 1913

*Submitted in accordance with the provisions of the Revised Statutes of Canada, 1906,  
Chapter 35, Section 33.*

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OTTAWA

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EXCELLENT MAJESTY

1914



*To Field Marshal, His Royal Highness Prince ARTHUR WILLIAM PATRICK ALBERT, Duke of Connaught and of Strathearn, and Earl of Sussex, in the Peerage of the United Kingdom, Prince of the United Kingdom of Great Britain and Ireland, Duke of Saxony, Prince of Saxe-Coburg and Gotha; Knight of the Most Noble Order of the Garter; Knight of the Most Ancient and Most Noble Order of the Thistle; Knight of the Most Illustrious Order of St. Patrick; one of His Majesty's Most Honourable Privy Council; First and Principal Knight Grand Cross and Great Master of the Most Honourable Order of the Bath; Knight Grand Commander of the Most Exalted Order of the Star of India; Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George; Knight Grand Commander of the Most Eminent Order of the Indian Empire; Knight Grand Cross of the Royal Victorian Order; Personal Aide-de-Camp to His Majesty the King; Governor General and Commander-in-Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR ROYAL HIGHNESS,—

The undersigned has the honour to present to Your Royal Highness the Annual Report of the Department of Railways and Canals, of the Dominion of Canada, for the past fiscal year from April 1, 1912, to March 31, 1913.

F. COCHRANE,

*Minister of Railways and Canals.*



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## REPORT

OF THE

## DEPUTY MINISTER OF RAILWAYS AND CANALS

FOR THE YEAR ENDING MARCH 31, 1913

To the Honourable F. COCHRANE,  
Minister of Railways and Canals.

SIR,—I have the honour to submit the annual report of the Department of Railways and Canals for the fiscal period of twelve months ended March 31, 1913.

The annual reports of the engineers, together with general and special reports from superintendents, both of railways and canals, and from other officers in the department are given in appendices. These include the report of the Government Railways' Managing Board; the report of the Government Chief Engineer of the western division of the Transcontinental Railway; the report of the Chairman of the Quebec Bridge Engineers' Board; and the report of the Chief Engineer of the Department.

In Part I, will be found statements of the accountant of the department, showing the amounts expended during the past fiscal year in construction, repair and maintenance of the several works under the department; also statements showing total expenditure on each canal since its construction, and on each of the government railways; also a statement showing payments made, year by year, to subsidized railways, with the aggregates of such payments.

In Part II are the statements of the Departmental Solicitor of the contracts and agreements entered into during the year.

## GENERAL SUMMARY.

During the twelve months of the past fiscal year 1912-13, the expenditures made by or through the department on its several works of operation, maintenance and construction, both railway and canal, and in furtherance by subsidy, under specific votes granted by Parliament, of railway enterprises in various parts of Canada other than the Government roads, also the revenue derived from the Government works, aggregate as follows:—

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The total railway expenditure amounted to \$36,659,539.55, of which \$18,888,794.06 was charged to capital, \$12,504,425.65 to revenue, and \$5,296,319.84 to income.

The railway expenditure on capital account included \$2,391,987.53 for the Intercolonial Railway, \$103,001.03 for the Prince Edward Island Railway, \$13,766,916.39 for the eastern division (from Moncton to Winnipeg) of the National Transcontinental Railway, which is in course of construction by a board of commissioners, \$1,099,063.15 for the Hudson Bay Railway, and \$1,512,825.96 for the Quebec bridge.

The railway expenditure on income included a total of \$4,935,507.35 paid as subsidies to railways other than the Government roads, and \$224,472.19 for the Board of Railway Commissioners for Canada.

The expenditure on the Intercolonial Railway amounted to \$14,371,970.22, namely, \$2,391,987.53 on capital account, and on revenue account (working expenses) \$11,979,982.69. On the maintenance of the Windsor Branch the expenditure was \$29,970.62 charged to revenue account.

On the Prince Edward Island Railway, the total expenditure was \$592,973.37, of which \$103,001.03 was charged to capital, and \$489,972.34 to revenue.

The expenditure on canals aggregated \$3,852,999.35; of which \$2,259,257.45 was chargeable to capital account, \$331,987.21 to income, \$703,285.32 for staff, and \$558,469.37 for repairs, the last two amounts being charged to revenue.

Adding to the above for miscellaneous expenditures common to both branches, the sum of \$9,338.17, the total expenditure for the year on railways and canals was \$40,551,877.07.

The total revenue derived from the government railway and canal works was \$12,749,771.12, of which the railways produced \$12,442,203.46, and the canals \$307,567.66,\* the sum of \$228,227.28 being derived from hydraulic rents.

The total government expenditure on railways prior to and since Confederation (July 1, 1867) up to March 31, 1913, amounts, on capital account, to \$304,015,587.52, including expenditure on the Quebec bridge, and also the sum of \$25,000,000 granted to the Canadian Pacific Railway Company for its main line; also the amount, \$660,683.09, expended on the Annapolis and Digby Railway. In addition, there has been expended from the consolidated fund a total of \$244,071,325.68, covering the operating expenses of the government roads, and \$48,529,915.92 subsidies other than the main line of the Canadian Pacific Railway, making a total expenditure of \$548,086,913.20. Of this amount, the sum of \$13,881,460.65 was expended prior to Confederation, namely, on the construction of portions of what is now the Intercolonial Railway system, \$10,766,725.54, and on the construction of the Prince Edward Island Railway, \$3,114,735.11.

\* Under the authority of an order in council, dated June 22, 1905, the system of charging tolls for the passage of vessels and goods was abolished on all the canals of the Dominion. Records, however, are kept for statistical purposes, and the compilation of the resultant figures is given in a separate report issued by the department.

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The total government expenditure on canals prior to and since July 1, 1867, to March 31, 1913, amounts on capital account to \$104,152,119.42, of which \$20,593,866.13 was expended prior to Confederation, and from the consolidated fund, for operation, maintenance and repairs, to \$34,155,960.09, making a total of \$138,308,079.51.

The total expenditure on the two branches, railways and canals, up to March 31, 1913, is as above, \$686,394,992.71; adding to which for general expenditures embracing both, the further sum of \$824,988.07, the grand total expenditure amounts to \$687,219,980.78.†

The total revenue collected since July 1, 1867, to March 31, 1913, amounts, from the government railways, to \$180,882,956.52, and from the canals to \$14,949,174.77, making a total of \$195,832,131.29.

Details in tabulated form showing the general classes and directions of the above expenditures and revenues will be found in the statements of the accountant of the department, printed in the appendices, Part I herewith.

## GOVERNMENT RAILWAYS IN OPERATION.

The government railways are the Intercolonial, the Windsor branch (maintained only and leased for operation), and the Prince Edward Island Railway. They are controlled by a board, 'The Government Railways Managing Board,' appointed under authority of an Order in Council, dated April 20, 1909.

Details respecting these railways and their operation will be found in the appendices, Part III, containing reports from the Government Railways Managing Board, and the officials of these roads.

The Intercolonial Railway operations resulted in a profit of \$777,863.74, but this sum at the close of the year was transferred to the Equipment Renewal Account, and was expended as part of the working expense, making their total \$11,979,982.69, to which is to be added \$4,500 paid under special votes, as compassionate allowances, making the total \$11,984,482.69. The total earnings amounted to \$11,984,482.69.

The Windsor branch maintenance expenditure amounted to \$29,970.62; the government share of the earnings credited to the branch amounted to \$68,246.70, leaving a profit of \$38,276.08.

The Prince Edward Island Railway working expenses amounted to \$489,972.34, its earnings amounted to \$389,474.07, the deficit being \$100,498.27.

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† This amount does not include the annual payment of \$119,700 to the provincial government of Quebec, being interest at the rate of 5 per cent on the sum of \$2,394,000 up to 1905, granted by 47 Victoria, ch. 8 (1884), nor the annual payment of \$107,730, being interest at the rate of 4½ per cent since and including 1905, on the said sum of \$2,394,000, for the line between Ottawa and Quebec, which sum was transferred to the public debt as a liability, and is dealt with by the Finance Department. (See Public Accounts, 1893-4, page 10, and 1906, page 79.)

## INTERCOLONIAL RAILWAY.

This railway extends from the Atlantic ocean ports of Halifax, St. John, Sydney and North Sydney, to Montreal.

On March 1, 1898, the operations of the Intercolonial, the westerly limit of which previously was Lévis, opposite Quebec, were extended to Montreal, by means of leases obtained from the Grand Trunk and Drummond County railway companies, making an addition of 169.81 miles to the operation of the government line.

The leasing agreement for an undivided half share or interest, made with the Grand Trunk Railway Company, and dated February 1, 1898, was confirmed, with modification, by the Act 62-63 Vic., chap. 5 (1899). It covers the distance between Ste. Rosalie station, and the City of Montreal, with termini in that city, also the Jacques Cartier junction, the Chaudiere bridge and its approaches, and the use of the Victoria bridge over the River St. Lawrence above Montreal. Its term extends for a period of ninety-nine years from March 1, 1898, renewable, in like terms of ninety-nine years each, forever; the annual rental being fixed at \$140,000.

Under authority of the Act 62-63 Vic., chap. 6 (1899), the Drummond County railway from Chaudiere to Ste. Rosalie, together with the branch from St. Leonard to Nicolet, was acquired by the Dominion; conveyance being made by a deed dated November 7, 1899.

On October 1, 1904, the Canada Eastern railway from Gibson to Loggieville, 123.67 miles, was purchased, and on April 19, 1905, the mortgaged Fredericton and St. Mary's bridge, with connected property, 1.33 mile, was surrendered to the government.

In September, 1911, the branch line, 12.52 miles long, from Ferrona junction to Sunny Brae, was acquired and operated, increasing the length of the railway to 1,468.15 miles. 26.09 miles are double-tracked. There are of spur lines 35.8 miles, and of sidings and tracks in yards, 391.43 miles

## FINANCIAL STATEMENTS.

## SUSPENSE ACCOUNTS.

The usual financial statements of the comptroller of the railway, which will be found in the appendices, have, this year, been supplemented by certain additional information regarding the 'Suspense Accounts,' authority for which was given by the Act of 1911, chapter 8, in order to make provision for renewals of equipment and rails, and for loss and damage by fire to railway property. There are also added a statement of receipts and expenses, and a cash statement.

These additional statements show the following in regard of the respective accounts.

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The 'Renewal of Equipment' account opened the year with a credit of \$765,950.44, and, during the year, received increments, including \$777,863.74, the profits of the year's operations, bringing its total up to \$2,012,955.31. The expenditures made from it amounted to \$2,011,615.54, leaving a balance at its credit on March 31, 1913, of \$1,339.77.

The 'Rail Renewal' account started the year with a credit of \$160,784.80. During the year this amount was increased to \$310,787.78, against which the charges aggregated \$81,861.26, leaving the amount at its credit on March 31, 1913, \$228,926.52.

The 'Fire Renewal' account shows a credit at the beginning of the year of \$56,269.40, increased during the year to \$116,269.40; against which there was charged \$13,506.23, leaving a credit balance on March 31, 1913, of \$102,763.17.

## CAPITAL ACCOUNT EXPENDITURE.

The expenditure on capital account during the fiscal year ended March 31, 1913, amounted to \$2,493,707.53, against which there are credits, including \$100,000 in connection with the ballast wharf at St. John, amounting to \$101,720, making the expenditure of the year, \$2,391,987.53, and bringing the total capital expenditure on the whole railway as amalgamated under the Acts 54-55 Vic., Chap. 50, (1891), and 62-63 Vic., Chaps. 5 and 6 (1899), together with the acquired Canada Eastern Railway, \$97,137,807.17.

The principal items charged to capital during the year were as follows (omitting cents): for straightening bridges, \$50,299; for increased accommodation at Halifax, \$123,245; for locomotive and car shops with equipment and new freight yard and cut-off line at Moncton, \$18,764; for Sydney Mines diversion, \$128,197; for diversion at Chatham and branch to wharf, \$114,927; for increased accommodation at Campbellton, \$126,290; for office buildings at Moncton, \$36,424; for increased accommodation at Truro, \$146,721; for increased accommodation along the line, \$68,700; for rolling stock, \$400,000; for improvements at Point Tupper, \$93,000; for increased accommodation at Ste. Flavie, \$26,386; for surveys and inspections, \$32,997; for increased accommodation at St. John, \$34,774; for docks and wharfs at Halifax, \$351,385; to the Halifax and Eastern Railway Company for plans, surveys, &c., taken over by the government, \$85,000; towards the construction of the Dartmouth to Deans railway, \$539,791; to pay claim of E. A. Wallberg, for work done under contracts, \$45,578.

## REVENUE ACCOUNT EXPENDITURE.

The expenditure on revenue account—working expenses—are grouped, as usual, under five main heads, each divided into a number of sub-heads.

These expenditures for the fiscal year ended March 31, 1913, were as follows: maintenance of way and structures, \$2,066,664.22, against which is a credit of \$8,206.14, for maintaining joint tracks, yards and other facilities, leaving the net

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amount, \$2,058,458.08; maintenance of equipment, \$3,041,672.80; traffic expenses, \$230,481.05; transportation expenses, \$6,438,297.89; against which is a credit of \$59,403.22, for operating joint yards and terminals, leaving the net amount, \$6,378,894.67; general expenses, \$270,476.09. The aggregate of the expenditures under these five heads for the year was \$11,979,982.69; adding to which \$4,500 paid as 'compassionate allowances,' under special votes, the total is \$11,984,482.69.

In the above expenditures, there were included the following items, (omitting cents): maintenance of way and structures:—for ties, \$243,239; for rails, \$180,056; roadway and track, \$738,407; removal of snow and ice and sand, \$95,873; and buildings, fixtures and grounds, \$327,751; maintenance of equipment:—for repairs to locomotives, \$788,952; renewals of locomotives, \$479,050; for repairs to passenger cars, \$296,939; renewals to passenger cars, \$239,525; for repairs to freight cars, \$655,273; for renewals of freight cars, \$359,287. The traffic expenses included, for advertising, \$39,780; and for outside agencies, \$85,494. The transportation expenses included: for station employees, \$775,314; yard conductors and brakemen, \$191,297; for yard engine-men, \$145,710; for fuel for yard engines, \$25,947; for road engine-men, \$641,478; for road trainmen, \$875,657; and for fuel for road engines, \$1,994,892. The general expenses included salaries and expenses of clerks and attendants, \$106,711; and pensions, \$80,506.

Details of expenditure will be found in the report of the Comptroller, Part III, of the appendices.

#### GENERAL NOTES.

The gross earnings of the railway for the year amounted to \$11,984,482.69, derived as follows:—

The passenger earnings were \$3,438,447.32; the freight earnings, \$8,028,760.13; the mail and express earnings, \$470,866.13, and miscellaneous, \$46,409.11. The revenue from transportation was 99.16 per cent of the whole.

The total engine mileage was 10,279,369, the total train mileage was 8,147,819, and the total car mileage 115,787,028.

The gross earnings per mile of railway (1,468.15 miles) were \$8,162.98, per engine mile \$1.17, per train mile \$1.47, and per car mile 10.35 cents.

The expenses per mile of railway were as follows: maintenance of way and structures, \$1,402.07; maintenance of equipment, \$2,071.77; traffic expenses, \$156.99; transportation expenses, \$4,344.85; general expenses, \$184.23.

The expenses per train mile were: maintenance of way and structures, 25.26 cents; maintenance of equipment, 37.33 cents; traffic expenses, 2.83 cents; transportation expenses, 78.29 cents; general expenses, 3.32 cents.

The ratio of expenses to gross earnings was as follows: maintenance of way and structures, 17.17 per cent; maintenance of equipment, 25.38 per cent; traffic expenses,

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1.92 per cent; transportation expenses, 53.23 per cent; and general expenses, 2.26 per cent.

Comparing the earnings for the twelve months ended on March 31, 1912, with the corresponding period ended March 31, 1913, the gross earnings for the latter year show an increase of \$1,390,696.85. The passenger traffic produced an increase of \$466,142.69; the freight traffic an increase of \$1,020,459.64; the mails, express traffic and miscellaneous, a decrease of \$50,905.48. The increase per mile of railway was \$947.24, and per train mile 4 cents.

The number of passengers carried was 3,763,115, an increase compared with the previous year of 346,562. There was an increase in the number of local passengers of 321,489, and of 25,073 in the number of through passengers.

Of revenue producing freight 5,203,468 tons were carried, an increase, compared with the previous year, of 666,870 tons. The local freight increased 460,884 tons, and the through freight increased 205,986 tons.

Details of the principal items of this freight will be found in the statements of the Comptroller, Appendix III, classified as follows: products of agriculture, 599,112 tons; animals and their products, also poultry, game and fish, 83,836 tons; products of mines, 1,664,485 tons; products of forest, 1,249,860 tons; manufactures, immigrants' effects, and miscellaneous, 1,606,176 tons.

The rolling stock equipment will be found specifically described in the report of the mechanical accountant in Appendix, Part III. Included in the purchases of the year were 23 locomotives (19 freight and 4 switching) all bought on renewals account, from revenue. Nine of these freight engines, which are of modern type, replaced 25 old small condemned engines. The nine have a tractive power of 343,680 lbs., or 32,860 lbs. in excess of the 25 condemned. The number of locomotives on March 31, 1913, was 390, two less than at the corresponding date of the previous year; their tractive power, however, is greater.

The value of stores on hand at the close of the year was \$1,465,157.78, comprising fuel, \$140,045.69; roadway and bridge material, \$732,902.78, and miscellaneous, \$592,209.31.

## COMPARATIVE STATISTICS YEARS 1911-12 AND 1912-13.

In 1911-12 the average tons of freight carried per train, producing revenue, was 256.69 and the number of passengers 62.36; in 1912-13, the average freight tonnage was 272.08, and passengers 65.03.

In 1911-12, the average tons per loaded car, producing revenue, was 17.21, and the number of passengers, 9.46; in 1912-13, the number of tons was 18.00, and of passengers 9.69.

The number of tons per train, all freight, in 1911-12, was 260.66, and in 1912-13, 276.27.

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The number of tons per car, all freight, in 1911-12, was 17.47, and in 1912-13, 18.27.

The average distance each ton of freight was carried in 1911-12 was 266.23 miles, and in 1912-13 the average distance was 269.53 miles. The average distances passengers were carried in those years were 49.20 miles and 51.72 miles respectively.

The average number of loaded cars per train in 1911-12, was 14.92 cars of freight, and 6.59 cars of passengers; in 1912-13 the number of freight cars per train was 15.12, and of passengers, 6.71.

The average number of empty cars per train in 1911-12, was 2.48, and in 1912-13, 2.52.

In 1911-12 the average of train miles per mile of road was, for freight trains, 3,204.83, and for passenger, 1,836.19; in 1912-13 these figures were, respectively, 3,510.99 and 2,038.73.

In 1911-12 the average per mile of road of revenue producing freight carried one mile was 822,661.67 tons, and passengers, 114,504.66; in 1912-13 the figures were,—freight, 955,261.74 tons, and passengers, 132,569.36.

The number of tons all freight, per mile of road carried one mile in 1911-12, was 835,387.31, and in 1912-13, 969,998.91.

The train mileage in 1911-12 was: passenger, 2,695,802 miles; freight, 4,705,173 miles; in 1912-13, passenger, 2,993,156 miles; freight, 5,154,663 miles.

The loaded car mileage in 1911-12 was, 70,193,524 miles, and in 1912-13, 77,932,195 miles.

The empty car mileage in 1911-12, was 11,667,392 miles, and in 1912-13, 12,978,505 miles.

The caboose car mileage in 1911-12, was 4,379,112 miles, and in 1912-13, 4,792,595 miles.

The total car mileage of 1911-12, was: passenger, 17,761,983 miles, and freight, 86,240,028 miles; in 1912-13, the figures were, passenger, 20,083,733, and freight, 95,703,295.

The total freight moved in 1911-12, was: 4,689,655 tons; of this quantity 4,536,599 tons were revenue producing. In 1912-13 the total freight moved was 5,372,938 tons, of which 5,203,442 tons were revenue producing.

Repairs to passenger cars cost, per car, in 1911-12, \$642.63, or per car mile, 1.66 cents; and in 1912-13, \$623.93, or per car mile, 1.48 cents.

Repairs to freight cars cost, per car, in 1911-12, \$51.22, or per car mile, .74 of a cent; and in 1912-13, \$32.85, or per car mile, .68 of a cent.

Repairs to locomotives cost, per locomotive, in 1911-12, \$1,799.20, or per locomotive mile, 7.56 cents; and in 1912-13, \$2,062.62, or per locomotive mile, 7.68 cents.

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## WINDSOR BRANCH.

The road is 32 miles in length. It extends from Windsor Junction on the Inter-colonial railway, to Windsor.

The railway is operated by the Dominion Atlantic Railway Company, formerly the Windsor and Annapolis Railway Company. The company pay all charges in connection with the working of the traffic, two-thirds of the gross earnings being allowed them, the government taking the remaining one-third, and assuming all cost of maintenance of the road and works. This arrangement is carried out under an agreement dated December 13, 1892, which extends for a further term of twenty-one years, arrangements similar to those made in 1871.

This agreement will expire on December 31, 1913.

All charges for superintendence and supervision of maintenance of work are borne by the government; the duty of supervision is performed by the chief officers of the Intercolonial railway.

The gross government receipts for the twelve months ended on March 31, 1913, amounted to \$68,246.70, a decrease compared with the previous year of \$4,929.90. The decrease was in freight traffic, the passenger traffic having increased. The cost of maintenance was \$29,970.62, leaving the net government earnings \$38,276.08.

## PRINCE EDWARD ISLAND RAILWAY.

This is a narrow gauge railway, 3 feet 6 inches. It extends from Tignish to Georgetown, 158.60 miles, and from Charlottetown to Murray Harbour, 52.30 miles, with branches to Souris and Cape Traverse. The length of the road operated was the same as in the previous year, 267.5 miles, together with another branch from Harmony to Elmira, 9.9 miles, completed and opened to traffic in November, 1912. By the addition of this branch the length of the railway was increased to 277.4 miles.

## CAPITAL ACCOUNT.

There was an addition of \$103,001.03 to the expenditure on capital account during the year ended on March 31, 1913, making the total capital expenditure \$8,790,728.41. The principal item was for the branch line from Harmony to Elmira, \$66,146.15.

## REVENUE ACCOUNT.

The gross earnings amounted to \$389,474.07 and the working expenses to \$489,972.34, leaving a deficiency of \$100,498.27. Compared with the previous year there was an increase of \$22,270.68 in the gross earnings and an increase of \$40,009.43 in the working expenses.

The expenditure on revenue account (working expenses) is classified, as on the Intercolonial, under five heads, with their several sub-heads. It is comprised in the following:—Maintenance of way and structures, \$135,434.58; maintenance of equip-

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ment, \$86,656.33; traffic expenses, \$1,113.36; transportation expenses, \$251,186.09; and general expenses, \$15,581.98.

The number of passengers carried was 433,888, an increase compared with the previous year of 45,812, and this traffic produced \$171,348.57, an increase of \$18,064.15. Of freight, 122,784 tons were carried, an increase of 2,566 tons. The freight earnings amounted to \$180,347.31, an increase of \$3,485.63. The earnings from mails and sundries amounted to \$37,778.19, an increase of \$720.90.

The freight carried was: agricultural products, 33,489 tons; animals, poultry, fish, and their products, 13,538 tons; products of mines, 16,359 tons; products of forests, 14,562 tons; manufactures, household goods and furniture, 14,562 tons; miscellaneous, 30,613 tons.

The engine mileage was 442,497 miles; the train mileage 361,714 miles; and the car mileage 2,334,635 miles.

The gross earnings per mile of railway amounted to \$1,442.50; per engine mile, to 88.02 cents; per train mile, to 107.67 cents; and per car mile, to 16.68 cents.

The working expenses per mile of railway aggregated \$1,814.71, and per train mile, 135.46 cents.

The value of stores on hand on March 31, 1913, was \$71,846.54, comprised in fuel, \$19,046.59; roadway and bridge material, \$16,573.34; and miscellaneous, \$36,226.61.

The road, buildings, and rolling stock are all in a satisfactory condition.

Details will be found in the report of the superintendent of the railway and in the reports of other officers therewith, in the appendices, Part III.

### GOVERNMENT RAILWAYS PROVIDENT FUND.

The Act of 1907, chap. 22, establishing a fund to be known as 'The Intercolonial and Prince Edward Island Railway Employees' Provident Fund,' came into effect on April 1, 1907. The main feature is that a contribution of  $1\frac{1}{2}$  per cent of each month's salary and wages is made by each employee to the fund, to which a like amount is added by the railway to the limit of \$100,000 a year. Interest at 3 per cent per annum is allowed on the employee's contribution. On retirement, after a certain length of service, the employee will receive for the rest of his life a monthly allowance for each year of his service, equal to  $1\frac{1}{2}$  per cent of his average monthly salary or wages for the preceding eight years; the minimum allowance to be \$20 a month, and the maximum two-thirds of his said average monthly pay. In the event of the death of a contributor to the fund while still in the service, his widow, children or relatives may be paid a sum equal to ninety per cent of his total contributions. The fund is administered by a board of five persons, three of whom are officers of the railway, the remaining two being elected annually by the contributing employees. The Act was amended by the Act of 1908, chap. 37, and again by the Act of 1909, chap. 20. Under

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this last, the Government Railways Managing Board nominates one of its members as chairman of the Provident Board.

The sixth annual report of the board, which is printed in Appendix III hereto, shows that at the beginning of the fiscal year, April 1, 1912, there was a balance to the credit of the fund of \$304,234.71, and that during the past fiscal year the contributions of the railway employees amounted to \$85,365.23. Adding to this a like contribution from the government railways, and the sum of \$2,146 for refunds, etc., together with interest accrued, \$9,350.20, the total of the fund for the year aggregated \$491,461.37. The total expenditure during the year was \$145,432.80, of which \$133,539.69 was paid out in retiring allowances, and for contributions refunded, a total of \$3,361.59, leaving at the credit of the fund on March 31, 1913, the sum of \$346,028.57.

In the course of the year 63 employees were retired and pensioned, and 36 pensioners died.

During the six years that the system has been in operation the total contributions by employees amount to \$465,745.31, and a like sum being added by the railways, makes the total \$931,490.62. During this period, 541 employees have been pensioned, of whom 127 have died, leaving 414 in enjoyment of their allowances at the close of the fiscal year 1913. The total paid out for retiring allowances is \$571,294.22.

## HUDSON BAY RAILWAY.

During the past fiscal year, closed on March 31, 1913, the location of the railway to Port Nelson, at the mouth of the River Nelson, Hudson Bay, was completed. The line will recross to the left bank of the river at Kettle rapids; the bridge at this point will be about 1,000 feet in length, with a span of about 650 feet over the main channel.

The work of construction for the first 185 miles, from The Pas to Thicket Portage, was placed under contract in August, 1911. Grading has been practically completed up to mile 70, and supplies for the balance of the work have been brought in, and it is expected that the whole 185 miles will be ready for the track by the spring of 1914. The substructure for the bridge over the River Saskatchewan at The Pas was completed in March, 1912, and the superstructure was nearly completed at the close of the year. This bridge consists of four fixed spans, and one swing span.

A contract for a further distance of 68 miles, from Thicket Portage to Split Lake Junction, was let on September 20, 1912, and a third contract covering the distance, 165 miles, from Split Lake Junction to Port Nelson, on December 17, 1912. The total distance is 418 miles.

## NATIONAL TRANSCONTINENTAL RAILWAY.

Under an agreement, dated July 29, 1903, ratified by the Dominion Act of that year, chap. 71, and under a modifying agreement dated February 18, 1904, ratified by the Act of that year, chap. 24, the Grand Trunk Pacific Railway Company, a com-

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pany incorporated by the Act of 1903, chap. 122, have undertaken certain obligations in respect of the construction and operation of a line of railway, wholly upon Canadian territory, between the city of Moncton, in the province of New Brunswick, and the navigable waters of the Pacific ocean. The railway is composed of two divisions, namely, the eastern division, between Moncton and Quebec, thence westerly through the northern part of the provinces of Quebec and Ontario, and, in the province of Manitoba, to the city of Winnipeg, and the western division, between Winnipeg and the Pacific ocean. The eastern division is being constructed by the government under commissioners appointed by the Governor in Council, and on completion is to be leased to and maintained and operated by the company, who undertake to construct, at their own cost and to maintain and operate, the western division. The lease of the eastern division is to be for a period of 50 years, at a rental of three per cent per annum upon the cost of its construction; the first seven years of the term to be free of rent; both divisions are to be equipped by the company, the first equipment to be of a value not less than \$20,000,000.

By way of assistance to the company in the construction of the western division, it is provided that the government shall guarantee payment of the principal and interest of an issue of bonds to be made by the company for an amount sufficient to produce a sum equal to 75 per cent of the cost of its construction; this amount is not to exceed \$13,000 per mile in respect of the prairie section from Winnipeg to the eastern limit of the Rocky Mountains (such limit to be established by the Chief Engineer of the company and the Chief Engineer of the government, as the result of actual surveys). This limit has been established as the east bank of Wolf creek, a point 120 miles west from Edmonton.

By the Act of 1905, chapter 98, three deeds of trust by way of mortgage, set out in the said Act, were ratified and confirmed, namely, one dated June 10, 1905, between the Grand Trunk Pacific Railway Company, the Royal Trust Company, and His Majesty, to secure the issue of first mortgage bonds; the second dated March 15, 1905, between the Grand Trunk Pacific Railway Company, the National Trust Company, and the Grand Trunk Railway Company, to secure the issue of second mortgage bonds, and the third, also dated March 15, 1905, between the Grand Trunk Pacific Railway Company, the National Trust Company, and the Grand Trunk Railway Company, to secure the issue of first mortgage bonds in respect of the branch line designated as the 'Lake Superior Branch.'

Payments from the proceeds of the bonds of the company for work done, etc., on the western division, are made from time to time on certificates given by the government Chief Engineer of this division, showing approved expenditures.

By the Act of 1909, chap. 19, authority was given for aiding in the completion of the construction of the 'prairie' section by a loan to the company of \$10,000,000, to be secured, as collateral, subject to any prior lien, by a mortgage on the 'prairie' section of their road; such loan to bear interest at the rate of 4 per cent per annum, and to be repayable in ten years.

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This loan, which is dealt with by the Finance Department, was duly made; the mortgage deed being dated May 22, 1909.

The several government expenditures (on the eastern division) to be made under the above-mentioned Acts and agreements are to be so made from appropriations by parliament for the purpose, and on the recommendation of the Minister of Railways and Canals, to whom accounts of all receipts, expenditures and liabilities are to be furnished monthly.

The Board of Commissioners are required to furnish annually a report to the Governor in Council, through the Minister of Railways and Canals, showing the receipts and expenditures of the year, and other information as to the railway, which report is to be submitted to parliament.

The headquarters of the board are in the city of Ottawa.

Under authority of the Act of 1912, chap. 37, the time for the completion of the Prairie section was extended to December 1, 1912, and of the Mountain section to May 1, 1914. Under authority of the Act of 1913, chap. 34, the time for the completion of the Prairie section has been further extended to December 1, 1913.

By the Act of 1912, chap. 39, the construction of the Eastern division, and its operation, until completed and leased to the Grand Trunk Pacific Railway Company, was placed under the charge and control of one commissioner (in place of four) to be appointed by the Governor in Council, and to hold office during pleasure. By an order in council, dated April 4, 1912, Mr. R. W. Leonard, C.E., the Chairman of the Commission as then existing, was appointed as such commissioner.

The report of the board for the fiscal year ended March 31, 1913, has been prepared, and will be laid before parliament in due course.

The following summary shows the position at the close of the year.

## EASTERN DIVISION.

*(Moncton to Winnipeg.)*

The total mileage from Moncton, N.B., to the west side of Water street, Winnipeg, is, approximately, 1,804.2 miles.

Of this mileage, up to March, 1913, 1,739 miles were graded, and the track was laid in the main line for a distance of 1,720.36, together with 384.73 miles of sidings, yards and double-track, making a total of 2,105.09 miles. The bridges were completed to the extent of 89.5 per cent.

The total expenditures by the Commissioners during the fiscal year ended March 31, 1913, on the entire eastern division, amounted to \$13,729,461.44, making their

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total expenditure from the date of their organization in September, 1904, to that date, \$130,247,152.95.

Detail summaries of this expenditure are furnished by the Chief Accountant of the Commission. They show the total for the past fiscal year to be made up as follows:—Headquarters, \$190,933.55; construction, \$13,511,637.77; and transport, \$26,840.12.

The total expenditure from September, 1904, to March 31, 1913, was as follows:—Construction, \$124,120,798.61; location, \$2,943,328.85; transport, \$1,244,053.77; and headquarters, \$1,938,971.72.

The statement of the accountant of the department (Part I, of the appendices hereto) shows the expenditure on the eastern division for the year ended March 31, 1913, to be \$13,766,916.39, and the total expenditure on this division up to that date \$130,300,684.92, the expenditures yearly being as follows:—

1904.. . . .	\$ 6,249 40
1905.. . . .	778,491 28
1906.. . . .	1,841,269 95
1907.. . . .	5,537,867 50
1908.. . . .	18,910,449 41
1909.. . . .	24,892,422 68
1910.. . . .	19,968,126 86
1911.. . . .	23,488,208 40
1912.. . . .	21,110,683 05
1913.. . . .	13,766,916 39
Total.. . . .	\$130,300,684 92

The section of the railway from Moncton to Edmundston, 230 miles, has been operated from November 20, 1912, to the close of the year, a tri-weekly service being afforded. The necessary rolling stock was leased, with the exception of a snow-plough purchased. The results of this operation are shown in a statement of the Chief Accountant of the Commission to have been as follows:—

Total expenditure, \$46,163.30; earnings, \$13,557.76; deficit, \$32,605.54. Against this deficit, however, there is the value of the equipment purchased, \$7,000 and stores, \$3,006.95, a total of \$10,016.33.

#### WESTERN DIVISION.

The western division extends from the western boundary of the Winnipeg terminals on the east bank of the River Assiniboine, in the city of Winnipeg, to the newly founded city of Prince Rupert, on the Pacific coast, a distance of 1,745 miles.

It is divided into two sections, namely, the 'Prairie Section,' extending from Winnipeg to the east bank of Wolf Creek—a point 120 miles west of Edmonton, the

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capital of the province of Alberta—a distance of 915 miles, and the 'Mountain Section,' which extends from the east bank of Wolf Creek to Prince Rupert, a distance of 830 miles.

This division is in course of construction by the Grand Trunk Pacific Railway Company, under the government guarantee agreements above mentioned, and the Government Chief Engineer of the Division, on whose certificates payments are made to the company, is Mr. Collingwood Schreiber, C.M.G., whose report, showing the position of the work at the close of the fiscal year, March 31, 1913, will be found printed in the appendices hereto, Part IV.

Of this, the following is a brief summary:—

' PRAIRIE SECTION.'

Though not fully completed according to contract, the whole road from Winnipeg to Wolf Creek has been regularly operated for public traffic during the past, as during the previous year. The work done has been principally work of maintenance and repair.

On this section the maximum grade against eastbound traffic is four-tenths of one per cent, and against westbound traffic five-tenths of one per cent.

On this section there are 142 stations, 114 way-station houses, 5 divisional station houses, 132 grain elevators, and 44 stock yards, besides numerous other buildings directly connected with the operation of the road.

' MOUNTAIN SECTION.'

On this section the track is laid for a distance of 210 miles from Wolf Creek westerly to the crossing of the River Rau Shuswap, and the road for this distance is being operated by regular traffic trains. Twenty-two way stations, and two divisional stations, together with round-houses, machine shops and a number of other structures have been provided.

From mile 210 to mile 245—Goat River crossing—the grading and the wooden bridges are about 95 per cent completed. The steel bridges over the rivers Rau Shuswap and Goat were not completed at the close of the year.

From mile 245 to mile 275—the second crossing of the River Fraser—about 48 per cent of the grading is done, exclusive of a tunnel 2,200 feet long, in driving which difficulty is experienced owing to the character of the material; a temporary line has been constructed round it.

From mile 275 to mile 362—Fort George—the clearing of the right-of-way is far advanced, and a small amount of grading has been done.

From mile 362 to mile 500—Burns lake—the clearing has been practically completed, but no grading has been done.

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From mile 500 to mile 570—Bulky Summit—the clearing has been completed and about 35 per cent of the grading done.

From mile 570 to mile 632—the crossing of Boulder creek—the grading is practically completed.

From mile 632 to mile 830—zero on the Grand Trunk Pacific Railway wharf at Prince Rupert—the grading, bridging and tracklaying are practically completed, 22 way stations and one divisional station, together with other buildings have been provided, and trains for public traffic are operated over the road from mile 649—New Hazelton to Prince Rupert, a distance of 181 miles. The progress made on this section has been retarded, owing to difficulty in procuring labour and to the unusually light fall of snow in the Rocky Mountains, which resulted in a rapid subsidence of the River Fraser waters, putting the steamers, built by the contractors for service between Tête Jaune Cache and Fort George, out of commission after three weeks, instead of being available for several months.

#### TOTAL EXPENDITURE.

The expenditure, up to March 31, 1913, amounted, on the 'Prairie Section,' to \$35,894,376.91, and, on the 'Mountain Section,' as certified, to \$50,232,556.34, making a total of \$86,126,933.25.

#### QUEBEC BRIDGE.

On August 29, 1907, the cantilever bridge in course of construction by the Quebec Bridge and Railway Company (originally commenced under a subsidy of \$1,000,000 authorized by the Act of 1899, chapter 7, and a subsidy agreement, dated November 12, 1900), collapsed.

Under the terms of an agreement with the company, dated October 19, 1903, ratified by the Act of 1903, chapter 54, the government had undertaken to guarantee the principal and interest of the bonds or other securities of the company to the limit of \$6,678,200, the company releasing claim to the balance remaining unpaid of the said subsidy, such guarantee to be secured by mortgage on the company's franchises, tolls and property. On February 1, 1904, a mortgage trust deed was executed, conveying to the Royal Trust Company (Montreal) as trustees, all the property and franchises of the company, and providing for the issue of bonds accordingly.

It was provided in this agreement that the government should have the right at any time, on one month's notice, to take over the company's undertaking, assets, property and franchises, on paying the shareholders the amount of their stock at par, not exceeding \$265,585.70, with simple interest at 5 per cent and a premium of 10 per cent on the par value of the paid-up shares.

Of the said subsidy of \$1,000,000, there had been paid to the company a total of \$374,353.33 prior to the execution of above agreement; and, subsequent to its execu-

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tion, payments were made from the proceeds of their bonds to the extent of \$5,016,453.66 (on certificates of the government engineer covering work done and materials delivered.\*

After the collapse of the bridge, the right of the government to take over the company's undertaking was exercised under the authority of an order in council of August 17, 1908. The date of assumption was December 1, 1908. The total of the amounts paid by the government to the several shareholders for their shares was \$355,279.07, payment being made to the parties concerned in November, 1908. The deed of assignment and transfer from the company to the government was dated October 18, 1909.

Under authority of an order in council of August 17, 1908, a board of three engineers was constituted for preparation of a new design and specifications, and for the reconstruction of the bridge, with powers to call in expert engineers as advisers on points of difference that might arise.

Towards the close of the year, 1909, such progress had been made that newspaper notice was given in November of that year, inviting contractors to visit the office of the board in order to obtain information to enable them to prepare offers for the superstructure, on the board's plans and specifications; intending contractors being, however, invited to submit alternative designs.

In June, 1910, the formal call for tenders was made by newspaper advertisement. In response, 35 different propositions were submitted, which were duly considered by the board, who, finally, after calling in advisory engineers, recommended the acceptance of an alternative design sent in by the St. Lawrence Bridge Company (with whom are associated the Dominion Bridge Company and the Canadian Bridge Company). This design the board considered to possess certain features of strength, simplification of erection, economical distribution of material, and general appearance which, in their opinion, would produce a bridge that 'would compare most favourably with the highest type of long-span bridges in existence.' By an order in council of March 31, 1911, authority was given for entrance into contract with the conjoined companies named, and such contract was executed under date April 4, 1911. The contract price is 9.02 cents a ton, and will aggregate about \$8,650,000, a saving of about \$2,600,000, having been effected by the elimination of the highways for vehicular traffic contemplated in the original design; the contract date for completion is December 31, 1915.

The bridge when constructed will have a total length of 3,228 feet, or about three-fifths of a mile. The centre span will be 1,800 feet long; the length of the suspended portion of it will be 640 feet. This span will, for a length of 760 feet over the channel of the river, have a height of 150 feet between its lower members and the high water level of the river. The two cantilever arms will each be 580 feet long. The width of the bridge between trusses will be 88 feet. The bridge will comprise a double-track railway, and two sidewalks for foot passengers.

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\* The history of the government's connection with the bridge prior to its collapse is given in the Departmental Annual Report of 1907-8, p. XLVII.

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Under date of January 10, 1910, a contract for the substructure was entered into with Messrs. M. P. and J. T. Davis, whose tender was the lowest of three obtained after newspaper advertisement calling for tenders; and supplementary agreements necessitated by changes in the caisson design and in the location of the north anchor pier, were made with them on May 23, 1910, and September 2, 1911.

The Board of Engineers for reconstruction, as originally constituted, has been modified by retirements and is at present composed as follows:—Charles N. Monsarrat, M. Can. Soc. C.E., chairman and chief engineer; Ralph Mojeski, Am. Soc. C.E., and C. C. Schneider, Can. Soc. C.E., and past president Am. Soc. C.E.

The headquarters of the board are in Montreal.

The report of the board for the year ended on March 31, 1913, will be found printed in the appendices hereto, Part V.

The expenditure during the past fiscal year up to March 31, 1913, was \$1,512,825.96, paid out of capital, and making the total capital expenditure \$2,343,652.43, adding to which, the expenditure from income, namely, for the year 1908-9, \$422,867.12 (in which is included the amount \$355,279.07, paid for acquiring the stock of the Quebec Bridge and Railway Company, and \$81,765.44, the expenses of the commission of inquiry into the causes of the collapse of the old structure), and for the year 1909-10, \$111,782.02, for the preparation of plans, etc., against which there is to be credited the sum of \$100,000 paid in 1910 to the government by the Phenix Bridge Company, the contractors for the original superstructure, in the final adjustment of claims arising out of the collapse, the total net cost to the government up to March 31, 1913, is \$2,778,337.57. This is irrespective of the amount of subsidy, \$374,353.33 paid to the Quebec Bridge Company as above mentioned.

The report of the board shows that up to March 31, 1913, the caisson for the south main pier had been successfully sunk to bed rock, about 86 feet below the bed of the river, or 102 feet below extreme high water, and had been filled with concrete up to the point from which the granite shaft of the pier will start. Satisfactory foundations for the south anchor pier had been reached.

On the north side of the river, the north intermediate pier supporting the approach spans had been completed, and satisfactory foundations had been obtained for the north anchor pier, and before the close of the season eleven courses of masonry had been laid. The shaft of the north main pier had been carried up to a point two feet below extreme high water.

The Chairman and Chief Engineer states that all the difficult work necessitating caissons and the use of compressed air has been completed, and that the remainder is above high water, will present no problems, and will be carried on much more rapidly.

As to the superstructure, he states that the contractors have constructed a large plant at Rockfield for the fabrication of the requisite steel, and that actual manufacturing was started in February, 1913; it is expected that their shops will be able to turn

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out about 2,000 tons of finished steel per month. The removal, under contract, of the unused material of the old bridge has continued, and about one-third of the total quantity has been removed.

The result of tests made under the supervision of the board shows that the members of the bridge as designed are able to develop the strength called for by the specifications.

## SUBSIDIZED RAILWAYS.

Information as to subsidized railways is given in the statements of the accountant and the law clerk of the department, respectively, which will be found in the appendices hereto. The accountant's statements show all payments made, year by year, since the beginning of the system of railway subsidies; the law clerk's statement shows the several subsidy agreements entered into during the past year, with certain details of the specification in each case.

The total payments made on subsidy account during the year ended March 31, 1913, amounted to \$4,935,507.35.

## BOARD OF RAILWAY COMMISSIONERS FOR CANADA.

By the Act 3 Edward VII, chap. 58 (1903), amending and consolidating the law respecting railways, the Railway Committee of the Privy Council was abolished, and in lieu thereof a Board of Commissioners, under the above title, was created, to consist of three members (increased to six by the Act of 1908, chap. 62), to be appointed by the Governor in Council; this Act was brought into force on February 1, 1904, by proclamation, on the authority of an order in council, dated January 18, 1904, which also appointed certain persons as commissioners. By the Act of 1908, chap. 61, the jurisdiction of the board was extended to cover the operation of telegraph and telephone lines, and by the Act of 1908, chap. 62, certain amendments were made to its constitution and otherwise. By the Act of 1909, chap. 31, the board was empowered to determine the maximum price to be charged for electricity developed through water powers leased from the Crown. An Act of 1910, chap. 50, amended certain provisions of the Railway Act regarding the powers of the board, and the Act of the same year, chap. 57, extended the jurisdiction of the board to cover the fixing by it of the tariffs of wireless telegraph and marine electric telegraphs or cables. The Act of 1911, chap. 22, gave powers to the board to require from railway companies the establishment of a staff of fire-rangers, modified the previous enactments regarding the disposal of electricity developed through government leased water powers, and amongst other enactments, made provision for action, through the board, to ensure the efficient operation of subsidized railways. The office of the board is at Ottawa, though it is authorized to hold sessions in any part of Canada. Its decisions and orders are final, subject to appeal to the Supreme Court upon questions of jurisdiction or law, and also to action thereon by the Governor in Council, in his discretion.

It is required to make, annually, a report of its proceedings, which report is laid before parliament. The report for the year ended March 31, 1913, has been received, and will be laid before parliament in due course.

## CANALS.

The total expenditure on the Dominion canals for the twelve months ended March 31, 1913, was \$3,852,999.35, comprising \$2,250,257.45 charged to capital; \$331,987.21 charged to income; \$703,285.32 for staff; and \$558,469.37 for repairs; the last two items being charged to revenue.

The balance of rentals due on April 1, 1912, was \$174,312.44. The rentals accrued during the year amounted to \$231,913.20, making a total of \$406,225.64. Of this amount, there was collected during the year a total, after deducting abatements, \$19,607.77, of \$228,227.28. The balance remaining due on March 31, 1913, was \$158,390.59. It should be observed that, as a general rule, rentals are payable in advance, this fact accounting, to a considerable extent, for the large amount of rentals due at the end of each year.

The total revenue collected amounted to \$309,072.10, the balance being made up of wharfage dues, fines, etc., and a total of \$61,229.70 derived from the operation of the Port Colborne grain elevator on the Welland Canal. Of this amount, refunds were made to the extent of \$1,504.44, leaving the net revenue \$307,567.66.

No tolls are charged on any of the Dominion canals.

Summaries of these expenditures and receipts will be found in the statements furnished by the accountant of the department, printed in the appendices, Part I, of the present report.

The above figures relate to the fiscal year 1912-13, but very voluminous statistics relating to canal traffic, and various commercial statistics for the season of navigation of the year 1912, will be found in the 'Canal Statistics,' which are issued as a separate report.

The principal facts of these statistics, summarized, are as follows:—

The total traffic through the several canals of the Dominion for the season of 1912 amounted to 47,587,245 tons, an increase of 9,556,892 tons compared with the previous year. 292,267 passengers were carried, a decrease of 12,637.

The following features of the principal canal traffic during the season of 1912 will be of interest:—

On the Welland canal, 2,851,915 tons of freight were moved, an increase of 314,286 tons. Of the total, 1,205,912 tons were agricultural products and 227,684 tons produce of the forest; of coal, 534,201 tons were carried; 2,786,687 tons were through freight, of which 2,008,863 tons passed eastward.

Of the through freight, Canadian vessels carried 1,889,228 tons, an increase of 284,906 tons, and United States vessels 897,459 tons, a decrease of 7,950 tons.

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The total through freight passed eastward and westward through this canal to United States ports was 415,756 tons, a decrease of 69,599 tons, compared with the year 1911.

The quantity of grain passed down the Welland and St. Lawrence canals to Montreal was 961,855 tons, an increase of 124,931 tons, as compared with the previous year; no transshipments have been made at Ogdensburg since 1903.

On the St. Lawrence canals, 3,477,188 tons were moved, an increase of 371,477 tons, of which 2,518,307 tons were eastbound freight, and 958,881 tons westbound freight; 1,119,567 tons were agricultural products, 1,103,315 tons coal, and 578,760 tons forest products.

On the Ottawa River canals, the total quantity of freight moved was 392,350 tons, an increase of 72,279 tons, of which 226,600 tons were produce of the forest.

On the Chambly canal, 618,415 tons were moved, an increase of 18,586 tons, of which 425,313 tons were produce of the forest, and 120,305 tons of coal.

On the Rideau canal, 160,133 tons were carried, a decrease of 12,094 tons; 28,642 tons being produce of the forest, and 14,666 tons of coal.

On the St. Peter's canal, 74,809 tons were carried, a decrease of 489 tons; 35,543 tons were coal.

On the Murray canal, 170,081 tons passed, an increase of 6,624 tons.

On the Trent canal, 77,150 tons were moved, an increase of 19,860 tons, of which 67,489 tons were produce of the forest.

On the St. Andrew's lock on the Red river, Manitoba, the volume of business was 95,549 tons.\*

On the Sault Ste. Marie canal, the total movement of freight was 39,699,655 tons, being an increase of 8,717,946 tons. There were 7,856 passages of vessels, the number of lockages being 6,200. Of wheat, 117,679,934 bushels, and of other grain, 37,116,343 bushels were carried; 2,388,710 barrels of flour; 31,141,063 tons of iron ore; 2,945,441 tons of coal; and 31,982,500 feet, board measure lumber.

The report of the Chief Engineer of the department, and the reports of the officers under his immediate control, which will be found in Part VI of the appendices, give comprehensive information as to the several works under his charge, the principal of which are the Hudson Bay railway, the Trent canal, the new Welland ship canal, and the terminals of the Intercolonial railway near Halifax.

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\* This work, which consists of a lock and dam on the Red River about 15 miles north of Winnipeg, was built and is operated by the Department of Public Works. It affords communication between Winnipeg and Lake Winnipeg. It is only mentioned here for statistical purposes.

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## RAILWAY STATISTICS.

The digest of the sworn statements of railway companies relating to their operations in Canada for the twelve months ended June 30, 1913, is prepared by the Departmental Comptroller of Statistics, and is issued as a separate report.

## CANAL STATISTICS.

The traffic statistics of the Dominion canals for the season of navigation of 1913 are compiled under the direction of the same officer, and are also issued as a separate report.

I have the honour to be, sir,  
Your obedient servant,

A. W. CAMPBELL,  
*Deputy Minister.*

## APPENDICES



PART I

STATEMENTS

OF THE

ACCOUNTANT OF THE DEPARTMENT

SHOWING

EXPENDITURE ON RAILWAYS AND CANALS

*(Including Subsidized Railways)*

AND RECEIPTS

FOR THE YEAR 1912-13

AND PREVIOUS YEARS



GENERAL Statement of the EXPENDITURE of the Department of Railways and Canals  
during the Fiscal Year ending March 31, 1913.

TOTAL EXPENDITURE—as per Statements, pages 35 and 36.. . . . .		\$40,551,877 07
Expenditure chargeable to Railways.. . . . .	\$29,860,893 75	
“ “ Railways General.. . . . .	380,312 49	
“ “ Quebec Bridge.. . . . .	1,512,825 96	
“ “ Railway subsidies.. . . . .	4,935,507 35	
Total expenditure, Railways.. . . . .		\$36,689,539 55
Expenditure chargeable to Canals.. . . . .	\$3,688,792 70	
“ “ Canals General.. . . . .	164,206 65	
Total expenditure, Canals.. . . . .		3,852,999 35
General expenditure.. . . . .	\$ 9,338 17	9,338 17
Total expenditure.. . . . .		\$40,551,877 07

CLASSIFICATION OF EXPENDITURE IN GENERAL.

Capital Account.. . . . .	\$21,148,051 51
Revenue Account.. . . . .	13,766,180 34
Income Account.. . . . .	702,137 87
Consolidated Fund (railway subsidies) Income..	4,935,507 35
Total expenditure during fiscal year..	\$40,551,877 07

CLASSIFICATION OF EXPENDITURE IN DETAIL.

<i>Railways.</i>		
Capital expenditure—Railways.. . . . .	\$17,360,968 10	
“ “ Railways General.. . . . .	15,000 00	
		\$17,375,968 10
Revenue expenditure—Railways.. . . . .	\$12,499,925 65	
“ “ Railways General.. . . . .	4,500 00	
		12,504,425 65
Income “ Railways General.. . . . .	\$360,812 49	
		360,812 49
<i>Quebec Bridge.</i>		
Capital expenditure—Quebec Bridge.. . . . .		1,512,825 96
<i>Railway Subsidies.</i>		
Consolidated Revenue—Railway subsidies.. . . . .		4,935,507 35
Total expenditure on Railways.. . . . .	\$36,689,539 55	
<i>Canals.</i>		
Capital expenditure—Canals.. . . . .	\$2,255,448 21	
“ “ Canals General.. . . . .	3,809 24	
		2,259,257 45
Income “ Canals.. . . . .	292,960 26	
“ “ Canals General.. . . . .	39,026 95	
		331,987 21
Revenue “ Canals Staff.. . . . .	605,248 57	
“ “ Canals Staff, General.. . . . .	98,036 75	
“ “ Canals Repairs.. . . . .	535,135 66	
“ “ Canals Repairs, General.. . . . .	23,333 71	
		1,261,754 69
Total expenditure on Canals.. . . . .	\$3,852,999 35	
General expenditure—Income account.. . . . .		9,338 17
Total expenditure.. . . . .		\$40,551,877 07

Department of Railways and Canals,  
Ottawa, August 1, 1913.

W. C. LITTLE,  
Accountant.

4 GEORGE V., A. 1914

GENERAL Statement of the REVENUE RECEIVED by the Department of Railways and Canals during the Fiscal Year ending March 31, 1913.

TOTAL REVENUE RECEIVED.. . . . .		<u>\$12,749,771 12</u>
Revenue from Railways.. . . . .	\$12,442,203 46	
Revenue from Canals .. . . . .	<u>307,567 66</u>	
Total revenue as above.. . . . .		<u>\$12,749,771 12</u>

STATEMENT OF REVENUE RECEIVED, IN DETAIL.

*Railways.*

Intercolonial Railway.. . . . .	\$11,984,482 69	
Windsor Branch Railway.. . . . .	<u>68,246 70</u>	
	\$12,052,729 39	
Prince Edward Island Railway.. . . . .	<u>389,474 07</u>	
Total Revenue from Railways... . . .		\$12,442,203 46

*Canals.*

Welland Canal.. . . . .	\$ 50,873 73	
" Elevator, Port Colborne.. . . . .	60,828 06	
Lachine Canal.. . . . .	144,574 79	
Beauharnois Canal.. . . . .	14,944 89	
Cornwall Canal.. . . . .	10,563 94	
Williamsburg Canal.. . . . .	3,107 30	
Soulanges Canal.. . . . .	3,576 00	
Chambly Canal.. . . . .	711 50	
Carillon and Grenville Canal.. . . . .	576 20	
Rideau Canal.. . . . .	6,098 75	
Trent Canal.. . . . .	10,866 51	
St. Peters Canal.. . . . .	2 00	
Sault Ste. Marie Canal.. . . . .	513 49	
Murray Canal.. . . . .	200 00	
Ste. Anne's Lock Canal.. . . . .	152 00	
Chats Falls Canal.. . . . .	<u>1 00</u>	
	\$307,590 16	
Less refunds, St. Peters Canal.. . . . .	<u>22 50</u>	
		307,567 66
Total Revenue received.. . . . .		<u>\$12,749,771 12</u>

W. C. LITTLE,  
*Accountant.*

Department of Railways and Canals,  
Ottawa, August 1, 1913.

SESSIONAL PAPER No. 20

## CANALS.

Name of Work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.		Total Expenditure during year.
			Staff.	Repairs.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Carillon } Grenville }		774 60	25,730 35	16,299 00	42,803 95
Chambly.....	12,529 07	3,486 97	34,323 21	44,748 39	95,087 64
Cornwall.....		29,753 37	79,897 25	56,423 40	166,074 02
Lachine.....	463,291 97		89,509 15	91,689 64	644,490 76
Murray.....		11,254 14	5,512 70	2,955 94	19,722 78
Rideau.....	41,565 00	21,992 94	56,863 98	91,984 66	212,406 58
Sault Ste. Marie.....	45,911 17	13,726 84	27,588 62	26,762 40	114,019 03
Soulanges.....	180,816 28		38,080 18	27,221 50	246,117 96
St. Anne's Lock.....		2,678 37	2,769 63	2,298 26	5,067 89
St. Ours Lock.....		39,143 77	3,530 02	2,419 44	8,657 83
St. Peters.....		39,143 77	5,144 13	807 78	45,095 68
Trent.....	1,162,605 75	41,499 98	47,431 26	50,049 83	1,301,586 82
Welland.....	347,711 15	39,674 82	156,598 55	93,231 29	687,215 81
Williamsburg.....		3,541 48	32,269 54	28,214 13	64,025 15
" Galops Canal.....	1,372 82	24,701 59			26,074 41
" Farran's Point.....		15,706 14			15,706 14
" Rapide Plat.....		45,025 25			45,025 25
Total.....	2,255,833 21	292,960 26	605,248 57	535,135 66	3,689,177 70
Less Culbute Canal unclaimed cheques.....	385 00				385 00
	2,255,448 21	292,960 26	605,248 57	535,135 66	3,688,792 70
GENERAL ON CANALS.					
Dredge Vessels—Lachine.....				7,010 28	7,010 28
" Rideau.....				14,814 77	14,814 77
Miscellaneous.....			2,650 92	620 41	3,271 33
Miscellaneous Works not provided for.....		842 33			842 33
Civil Service Gratuities.....		4,830 75			4,830 75
Statistical Officers.....			33,423 96		33,423 96
Sunday Labour.....			40,415 85		40,415 85
Surveys and Inspections.....		13,932 44			13,932 44
( New Tug.....	3,809 24				3,809 24
Maintenance, staff.....			21,546 02		21,546 02
Protection wall north side Lake St. Francis.....		5,601 72			5,601 72
Automatic water gauges.....		298 44			298 44
Removing old stone piers of bridge over lost channel, St. Timothé.....		374 34			374 34
Dredging.....		7,146 93			7,146 93
Completing macadam- izing of H. B. Dyke.....		6,000 00			6,000 00
Hungry B., and Ste. Barbe Dyke Repairs.....				888 25	888 25
Total.....	3,809 24	39,026 95	98,036 75	23,333 71	164,206 65
Total.....	2,259,257 45	331,987 21	703,285 32	558,469 37	3,852,999 35

Grand total on canals, \$3,852,999.35.

4 GEORGE V., A. 1914

## RAILWAYS.

Name of work.	Chargeable to Capital.	Chargeable to Income.	Chargeable to Revenue.	
			Working Expenses.	
RAILWAYS.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Intercolonial. . . . .	2,391,987 53		11,979,982 69	
National Transcontinental. . . . .	13,766,916 39			
Prince Edward Island. . . . .	103,001 03		489,972 34	
Windsor Branch. . . . .			29,970 62	
Hudson Bay. . . . .	1,099,063 15			
Quebec Bridge. . . . .	1,512,825 96			
Total. . . . .	18,873,794 06		12,499,925 65	
RAILWAY SUBSIDIES. . . . .		4,935,507 35		
GENERAL ON RAILWAYS.				
Purchase of car "Canada" for Governor General. . . . .	15,000 00			
Railway Commission—Maintenance. . . . .		171,044 24		
" " Statutory. . . . .		53,427 95		
Surveys and inspections—Including inspection Grand Trunk Pacific Railway. . . . .		99,935 59		
Railway grade crossing fund. . . . .		20,807 38		
Attendance, repairs and alterations to Governor General's car. . . . .		5,500 00		
To pay expenses in connection with consolidation of Railway Act. . . . .		3,000 00		
Contribution of Government railways to the Faculty of McGill University. . . . .		2,500 00		
Contribution of Government railways to Polytechnic School Montreal. . . . .		2,500 00		
Remuneration to Government Director, Grand Trunk Pacific Railway. . . . .		2,000 00		
Subscription to International Congress, Brussels. . . . .		97 33		
Compassionate allowance to Mrs. E. Bellavance, I.C.R. (special vote). . . . .			1,000 00	
Compassionate allowance to Mrs. Emily Grenier, I.C.R. (special vote). . . . .			1,000 00	
Compensation to O. Savary, I.C.R. (special vote). . . . .			500 00	
Compassionate allowance to Mrs. Rebecca McDonald, I.C.R. (special vote). . . . .			1,000 00	
Allowance to the infant children of the late Joseph Cuthbertson, I.C.R. (special vote). . . . .			1,000 00	
Total. . . . .	15,000 00	360,812 49	4,500 00	
Total on railways. . . . .	18,888,794 06	5,296,319 84	12,504,425 65	
Grand total on railways including Quebec Bridge, \$36,689,539.55.				
MISCELLANEOUS EXPENDITURE.				
Cost of litigation. . . . .		194 81		
Miscellaneous investigations under the Inquiries Act. . . . .		9,143 36		
Total. . . . .		9,338 17		
Grand total on railways and canals, including miscellaneous expenditure. . . . .	21,148,051 51	5,637,645 22	13,766,180 34	
Total amount of expenditure, \$40,551,877.07.				

## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, Ordinary Repairs and Working Staff up to March 31, 1913.

## BAIE VERTE CANAL.

	Year ending.	Capital.	Income.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1868		
" since " .....	1869		
" " .....	1870		
" " .....	1871		17,929 34
" " .....	1872		6,399 41
" " .....	1873		14,943 83
" " .....	1874		4,018 90
" " .....	1875		443 00
" " .....	1876		110 75
" " .....	1877		22 30
" " .....	1878		
" " .....	1879		
" " .....	1880		
" " .....	1881		520 00
" " .....	1882		
" " .....	1883		
" " .....	1884		
" " .....	1885		
" " .....	1886		
" " .....	1887		
" " .....	1888		
" " .....	1889		
" " .....	1890		
" " .....	1891		
" " .....	1892		
" " .....	1893		
" " .....	1894		
" " .....	1895		
" " .....	1896		
" " .....	1897		
" " .....	1898		
" " .....	1899		
" " .....	1900		
" " .....	1901		
" " .....	1902		
" " .....	1903		
" " .....	1904		
" " .....	1905		
" " .....	1906		
" " .....	1907		
" " .....	1908		
" " .....	1909		
" " .....	1910		
" " .....	1911		
" " .....	1912		
" " .....	1913		
Total .....			44,387 53

W. C. LITTLE,  
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## BEAUHARNOIS CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	1868	1,611,424 11			
" " since	1869		63,193 75	9,349 99	6,216 98
" " " "	1870		55 00	9,626 99	6,498 57
" " " "	1871		27 50	10,117 57	6,384 81
" " " "	1872			12,316 53	5,722 36
" " " "	1873		27 50	11,792 46	15,733 38
" " " "	1874		5,122 50	12,210 73	9,882 06
" " " "	1875		26 00	15,392 51	10,990 56
" " " "	1876		36 00	14,399 32	12,253 01
" " " "	1877			14,465 86	17,170 83
" " " "	1878			14,377 63	15,207 36
" " " "	1879			14,883 37	9,861 05
" " " "	1880			15,015 86	10,370 71
" " " "	1881	266 15		15,362 61	8,997 34
" " " "	1882			17,659 93	10,770 67
" " " "	1883			18,804 53	20,813 86
" " " "	1884		6,727 44	18,287 77	15,826 71
" " " "	1885		3,277 98	19,107 38	16,232 61
" " " "	1886		7,999 79	18,960 40	14,637 70
" " " "	1887		8,491 80	19,228 90	14,356 00
" " " "	1888		3,633 57	18,867 45	14,999 88
" " " "	1889		14,411 97	19,325 05	14,285 98
" " " "	1890		10,993 52	20,019 11	14,982 54
" " " "	1891			19,847 42	14,999 20
" " " "	1892		17,085 68	18,886 86	12,537 39
" " " "	1893		1,696 23	20,050 01	14,999 80
" " " "	1894			20,348 34	14,107 11
" " " "	1895		6,547 72	20,574 53	13,903 46
" " " "	1896		27,982 93	20,428 59	12,299 49
" " " "	1897			20,725 47	15,050 85
" " " "	1898	25,000 00	9,813 15	21,012 64	14,862 98
" " " "	1899		5,799 34	20,650 00	16,164 92
" " " "	1900		1,000 00	20,613 32	13,463 01
" " " "	1901		4,959 22	20,147 59	14,505 30
" " " "	1902		483 40	20,118 42	14,199 12
" " " "	1903			16,682 52	6,532 33
" " " "	1904			8,218 14	10,063 38
" " " "	1905			9,236 27	11,936 37
" " " "	1906		14,949 83	9,086 68	10,499 99
" " " "	1907		2,531 24	9,291 91	18,640 71
" " " "	1908		598 64	7,552 02	11,711 69
" " " "	1909		2,260 81	7,032 31	13,019 76
" " " "	1910		21,758 84		†
" " " "	1911		24,319 49		†
" " " "	1912				†
" " " "	1913				†
Total		*1,636,690 26	265,810 84	649,574 89	525,691 23

\* See page 52 for total of St. Lawrence River and Canals.

† This canal being under lease since 1908, no expenditure has been incurred for maintenance nor operation.

W. C. LITTLE,  
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

STATEMENT showing the amounts expended on Construction, Renewals, &c.—Continued.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government					
Government expenditure prior to Confederation		63,033 64			
" since "	1868		19,817 22	6,301 88	8,911 42
" "	1869			6,549 38	10,157 80
" "	1870		4,167 96	6,617 81	9,852 29
" "	1871		23,119 37	8,676 90	8,218 24
" "	1872	165,257 28		8,324 51	17,235 31
" "	1873	133,199 10	3,051 38	10,068 28	8,781 50
" "	1874	245,258 38		10,710 88	10,605 82
" "	1875	339,864 76		10,378 57	18,520 44
" "	1876	326,203 16		10,764 38	11,475 96
" "	1877	245,738 04		11,050 27	10,304 06
" "	1878	22,676 20		11,401 30	5,082 72
" "	1879	243,141 24		11,501 22	7,629 98
" "	1880	281,514 27		11,959 14	7,625 54
" "	1881	336,707 53		13,059 18	8,076 91
" "	1882	433,084 39		14,387 49	7,582 68
" "	1883	433,575 10		17,479 58	8,310 02
" "	1884	399,267 16		17,393 91	7,918 42
" "	1885	157,187 72		19,702 30	10,429 26
" "	1886	104,973 24	75 00	20,597 82	9,303 31
" "	1887	20,747 11		20,011 36	19,554 41
" "	1888	38,996 29		21,531 12	10,036 62
" "	1889	298 17		22,098 88	10,135 66
" "	1890	17 58	4,526 61	15,896 16	7,582 38
" "	1891		4,395 25	21,230 22	10,796 68
" "	1892	34,585 64	15,036 48	17,458 69	8,620 15
" "	1893	207 00	42,298 74	16,762 71	10,669 28
" "	1894	385 55	20,034 94	14,144 98	11,620 09
" "	1895		5,963 76	15,453 21	12,303 25
" "	1896	3,850 31		13,995 69	12,161 19
" "	1897	1,908 44	4,939 20	13,780 29	11,607 95
" "	1898	82,663 37	5,082 03	11,697 81	10,993 61
" "	1899	39,999 37		11,919 27	11,478 88
" "	1900	22,802 27	4,476 50	13,657 06	14,666 71
" "	1901	4,930 65	9,331 95	13,342 22	13,416 00
" "	1902		16,998 69	13,725 99	19,366 30
" "	1903		15,992 52	14,348 17	17,766 28
" "	1904		9,150 07	16,224 94	17,262 29
" "	1905		8,715 46	15,858 19	19,977 19
" "	1906		24,179 33	18,232 71	10,924 72
" "	1907		9,393 38	16,749 03	7,036 40
" "	1908		1,387 35	23,019 45	9,775 35
" "	1909		68,597 35	23,085 54	16,758 01
" "	1910		10,410 09	23,512 72	11,925 28
" "	1911		9,051 98	23,608 04	11,303 46
" "	1912			25,495 59	11,531 20
" "	1913		774 60	25,730 35	16,299 00
Total		4,182,092 96	340,967 21	709,496 19	516,589 21

†Included in total cost of Ottawa River Works, *see* page 47. Cost of enlargement, \$4,119,039.32.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## CHAMBLY CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation	.....	634,711 76	.....	.....	.....
" " since	1868	.....	.....	8,312 90	9,355 70
" " " "	1869	.....	.....	8,437 22	13,120 97
" " " "	1870	.....	.....	8,934 41	20,180 73
" " " "	1871	.....	2,839 85	10,214 71	22,426 33
" " " "	1872	.....	1,906 40	9,628 50	22,327 99
" " " "	1873	.....	759 00	10,390 44	11,789 27
" " " "	1874	.....	2,810 00	11,675 67	16,427 19
" " " "	1875	2,415 00	.....	12,201 99	16,306 91
" " " "	1876	.....	.....	10,593 14	13,273 56
" " " "	1877	80 00	.....	10,281 78	10,111 32
" " " "	1878	.....	.....	10,413 99	6,022 96
" " " "	1879	.....	.....	11,301 53	8,809 77
" " " "	1880	.....	.....	11,516 22	12,377 74
" " " "	1881	.....	.....	13,950 47	20,705 17
" " " "	1882	.....	31,796 41	16,686 78	16,843 60
" " " "	1883	.....	21,332 36	15,904 38	15,182 24
" " " "	1884	.....	41,640 77	18,448 85	12,003 34
" " " "	1885	.....	21,049 23	18,378 55	13,046 96
" " " "	1886	.....	14,547 27	19,501 28	11,999 77
" " " "	1887	.....	17,911 17	19,053 62	20,071 37
" " " "	1888	.....	65,536 64	20,073 60	11,823 74
" " " "	1889	.....	51,437 87	19,679 22	19,392 18
" " " "	1890	.....	23,221 48	19,655 38	14,399 93
" " " "	1891	.....	43,344 41	19,204 76	11,399 93
" " " "	1892	.....	38,353 99	19,665 22	12,976 48
" " " "	1893	.....	21,127 65	19,310 29	12,451 03
" " " "	1894	.....	8,567 78	19,040 93	11,779 12
" " " "	1895	.....	6,147 63	19,325 49	11,920 74
" " " "	1896	.....	3,694 63	19,349 65	11,801 12
" " " "	1897	.....	12,665 88	18,754 17	13,128 55
" " " "	1898	*150.00	13,184 68	17,992 90	12,466 51
" " " "	1899	.....	15,255 42	18,336 50	11,997 51
" " " "	1900	.....	5,448 88	18,397 58	13,995 00
" " " "	1901	.....	1,195 09	18,529 48	17,572 35
" " " "	1902	.....	19,132 80	18,832 25	17,313 02
" " " "	1903	.....	8,977 43	19,286 10	21,745 65
" " " "	1904	.....	26,701 59	21,544 69	25,656 00
" " " "	1905	.....	33,066 50	26,970 79	19,896 57
" " " "	1906	.....	26,192 72	26,039 53	25,173 48
" " " "	1907	.....	29,953 80	19,916 33	22,508 88
" " " "	1908	157 90	34,264 31	28,375 21	30,627 72
" " " "	1909	13,307 02	35,784 54	28,440 40	24,389 29
" " " "	1910	30,479 41	8,207 00	29,198 76	22,825 53
" " " "	1911	20,000 04	8,717 20	30,548 74	23,950 19
" " " "	1912	15,469 29	26,838 40	34,796 66	29,508 01
" " " "	1913	12,529 07	3,486 97	34,323 21	44,748 39
Total	.....	†728,999 47	727,097 75	841,414 37	787,829 80

\* Less proceeds of sale of piece of land in 1898.

† Chamblay Canal and Richelieu River.

Chamblay Canal, as above ..... \$ 728,999 49

St. Ours Lock, see page 53. .... 125,843 93

Less amounts deducted at Confederation, see Public Accounts, 1868, part I, page 9. .... \$ 854,843 42

Government expenditure prior to Confederation.

Chamblay Canal as above ..... \$ 634,711 76

St. Ours Lock, see page 53. .... 121,537 65

\$ 756,249 41

Returned as an asset in Public Accounts, 1868. .... 433,807 83

322,441 58

Agreeing with Public Accounts, 1913, page 4 ..... \$ 532,401 84

## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## CORNWALL CANAL.

	Year ending.	Chargeable to Capital.		Renewals Chargeable to Income.	Staff.	Repairs.	
		\$	cts.	\$	cts.	\$	cts.
Government expenditure prior to Confederation.....		1,933,152	69				
Government expenditure since Confederation .....	1868			2,786	00	11,244	47
" " .....	1869	10,692	04			10,347	91
" " .....	1870			17,780	05	10,368	16
" " .....	1871			7	50	11,848	39
" " .....	1872			10,000	21	10,594	30
" " .....	1873			1,011	75	13,042	25
" " .....	1874					13,405	20
" " .....	1875	1,780	00			13,351	91
Cost of original construction..				1,945,624	73		
Expenditure by Dominion Government .....	1876					13,320	61
" " .....	1877	49,211	37			13,375	70
" " .....	1878	145,015	45			13,825	50
" " .....	1879	143,032	05			13,817	96
" " .....	1880	109,454	95			14,440	33
" " .....	1881	53,948	14			15,173	60
" " .....	1882	44,587	61			15,052	20
" " .....	1883	21,728	93			18,283	67
" " .....	1884	22,018	13			18,475	48
" " .....	1885	62,034	90	16,298	96	15,988	96
" " .....	1886	57,820	83	6,960	95	15,994	80
" " .....	1887	46,966	43			17,520	54
" " .....	1888	67,945	74			16,938	54
" " .....	1889	163,993	85			17,890	55
" " .....	1890	365,038	01	2,000	00	17,063	49
" " .....	1891	599,001	85	1,459	98	16,077	72
" " .....	1892	398,555	25	2,345	26	15,596	66
" " .....	1893	352,536	13			15,173	01
" " .....	1894	404,990	22			15,344	02
" " .....	1895	450,689	65	21,497	74	15,414	56
" " .....	1896	448,408	31	2,175	00	15,472	26
" " .....	1897	438,487	51			15,540	43
" " .....	1898	133,208	96			15,011	50
" " .....	1899	37,649	00	15,960	80	16,000	00
" " .....	1900	169,889	51	18,547	50	18,798	10
" " .....	1901	62,032	47			17,104	13
" " .....	1902	90,535	18			17,896	58
" " .....	1903	77,833	81			70,129	29
" " .....	1904	113,795	16	1,730	16	45,792	64
" " .....	1905	104,093	45	8,324	83	71,073	68
" " .....	1906	37,879	09	20,063	79	71,246	77
" " .....	1907	5,218	03	4,191	61	52,050	56
" " .....	1908	9,897	90	11,270	83	73,651	90
" " .....	1909	495	00	151,628	65	75,581	54
" " .....	1910	89	54	35,549	06	76,519	49
" " .....	1911			76,719	09	78,583	80
" " .....	1912	8,037	07	60,352	90	83,784	79
" " .....	1913			29,753	37	79,897	25
Cost of enlargement.....				5,297,179	48		
Total .....				7,242,804	21	1,303,105	20
						822,141	38

\* Included in total cost of St. Lawrence River and Canals, See page 52.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## CULBUTE LOCK AND DAM.

	Year ending—	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.	1868	.....	.....	.....	.....
	1869	.....	.....	.....	.....
	1870	.....	.....	.....	.....
	1871	.....	.....	.....	.....
	1872	.....	.....	.....	.....
	1873	.....	835 53	.....	.....
	1874	.....	38,388 99	.....	.....
	1875	63,659 29	.....	.....	.....
	1876	76,842 44	.....	.....	.....
	1877	56,081 87	.....	.....	.....
	1878	5,933 53	.....	.....	.....
	1879	20,694 19	.....	.....	.....
	1880	16,688 20	.....	202 50	259 31
	1881	4,721 62	.....	962 85	.....
	1882	29,567 15	.....	790 00	162 33
	1883	14,249 60	.....	695 00	288 99
	1884	8,151 16	.....	733 50	.....
	1885	19,071 76	.....	730 00	572 75
	1886	26,385 27	.....	730 00	2,396 14
	1887	7,760 88	.....	730 00	967 33
	1888	7,573 99	.....	739 50	730 60
	1889	17,112 01	.....	1,050 00	116 53
	1890	2,818 35	.....	747 83	.....
	1891	2,183 15	9,122 05	745 25	499 91
	1892	.....	1,546 25	736 00	.....
	1893	.....	1,420 65	749 00	13 55
	1894	.....	2,540 14	730 00	494 43
	1895	.....	1,475 26	436 05	434 28
	1896	.....	.....	.....	.....
	1897	.....	.....	.....	.....
	1898	.....	.....	.....	100 00
	1899	.....	.....	.....	.....
	1900	3,085 00	.....	.....	.....
	1901	197 00	.....	.....	.....
	1902	.....	1,135 00	.....	.....
	1903	.....	.....	.....	.....
	1904	.....	2,204 50	.....	.....
	1905	.....	2,255 00	.....	.....
	1906	.....	.....	.....	.....
	1907	.....	.....	.....	.....
	1908	.....	.....	.....	.....
	1909	.....	.....	.....	.....
	1910	.....	.....	.....	.....
	1911	.....	.....	.....	.....
	1912	.....	.....	.....	.....
Less unclaimed Cheques	1913	585 00	.....	.....	.....
Total.....		*382,391 46	60,923 37	11,507 48	7,036 15

\* Included in total cost of Ottawa River Works, see page 47.

W. C. LITTLE,  
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.



4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## LAKE ST. FRANCIS.

				Year	Capital.	Renewals, Chargeable to Income.
					\$ cts.	\$ cts.
Government expenditure since Confederation....				1868		
"	"	"	"	1869		
"	"	"	"	1870		
"	"	"	"	1871		
"	"	"	"	1872		
"	"	"	"	1873		
"	"	"	"	1874		
"	"	"	"	1875		
"	"	"	"	1876		
"	"	"	"	1877		
"	"	"	"	1878		
"	"	"	"	1879		
"	"	"	"	1880		
"	"	"	"	1881		
"	"	"	"	1882		
"	"	"	"	1883		
"	"	"	"	1884		
"	"	"	"	1885		
"	"	"	"	1886		
"	"	"	"	1887		
"	"	"	"	1888		
"	"	"	"	1889		
"	"	"	"	1890		
"	"	"	"	1891		
"	"	"	"	1892		
"	"	"	"	1893		
"	"	"	"	1894		
"	"	"	"	1895		
"	"	"	"	1896		
"	"	"	"	1897		
"	"	"	"	1898	3,420 00	
"	"	"	"	1899	23,110 00	2,495 47
"	"	"	"	1900	15,431 46	12,288 39
"	"	"	"	1901	15,000 00	8,060 30
"	"	"	"	1902	13,945 25	
"	"	"	"	1903	5,000 00	
"	"	"	"	1904		2,199 52
"	"	"	"	1905	†	
"	"	"	"	1906	†	
"	"	"	"	1907	†	
"	"	"	"	1908	†	
"	"	"	"	1909	†	
"	"	"	"	1910	†	
"	"	"	"	1911	†	
"	"	"	"	1912	†	
"	"	"	"	1913	†	
Total.....					*75,906 71	25,043 68

\* Included in total cost of St. Lawrence River and Canals, *see* page 52.

† Transferred to Department of Marine and Fisheries in 1905.

W. C. LITTLE,  
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## LAKE ST. LOUIS.

				Year ending	Chargeable to Capital.	Chargeable to Revenue.
					\$ cts.	\$ cts.
Government expenditure prior to Confederation				1868		
" " since				1869		
" " "				1870		
" " "				1871		
" " "				1872		
" " "				1873		
" " "				1874		
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" " "				1892		
" " "				1893		
" " "				1894		
" " "				1895	4,753 14	
" " "				1896	49,909 31	
" " "				1897	73,300 41	
" " "				1898	64,495 83	
" " "				1899	57,607 79	
" " "				1900	11,765 70	
" " "				1901	12,918 31	
" " "				1902	6,000 00	
" " "				1903	9,508 72	
" " "				1904	7,916 90	
" " "				1905	†	
" " "				1906	†	
" " "				1907	†	
" " "				1908	†	
" " "				1909	†	
" " "				1910	†	
" " "				1911	†	
" " "				1912	†	
" " "				1913	†	
Total					*298,176 11	

\* Included in total cost of St. Lawrence River and Canals, *see* page 52.

† Transferred to Department of Marine and Fisheries in 1905.

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## MURRAY CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation					
" since	"				
" 1868	1868		400 00		
" 1869	1869				
" 1870	1870				
" 1871	1871				
" 1872	1872				
" 1873	1873				
" 1874	1874				
" 1875	1875				
" 1876	1876				
" 1877	1877				
" 1878	1878				
" 1879	1879				
" 1880	1880				
" 1881	1881				
" 1882	1882	7,135 63			
" 1883	1883	84,071 68			
" 1884	1884	118,187 43			
" 1885	1885	148,902 66			
" 1886	1886	179,704 52			
" 1887	1887	142,563 66			
" 1888	1888	146,754 37			
" 1889	1889	215 326 46			
" 1890	1890	106,760 35		494 31	
" 1891	1891	61,260 49		5,137 03	173 53
" 1892	1892	5,964 22		5,803 48	3,505 15
" 1893	1893	30,838 79		5,499 62	5,341 34
" 1894	1894			5,667 52	5,295 57
" 1895	1895			5,354 97	5,063 49
" 1896	1896			5,409 10	5,410 33
" 1897	1897			5,526 87	3,966 41
" 1898	1898			5,799 94	4,710 23
" 1899	1899			5,073 70	3,533 68
" 1900	1900			5,613 83	2,777 60
" 1901	1901			5,175 74	1,138 15
" 1902	1902			5,254 51	6,377 19
" 1903	1903	500 00		5,757 00	4,627 70
" 1904	1904	750 00	2,521 13	5,291 43	6,075 94
" 1905	1905	100 00	740 45	5,346 62	4,452 68
" 1906	1906		293 75	5,183 61	2,840 91
" 1907	1907		10,423 00	2,788 14	1,710 55
" 1908	1908		37,334 70	4,244 42	2,953 23
" 1909	1909	126 45	20,250 61	4,720 09	3,374 82
" 1910	1910			4,378 74	2,674 57
" 1911	1911			3,942 94	2,075 26
" 1912	1912		14,390 45	4,213 21	3,344 46
" 1913	1913		11,254 14	5,512 70	2,955 94
Total		*1,248,946 71	97,608 23	117,189 52	84,378 73

\* Agreeing with Public Accounts Balance Sheet, 1913, page 4.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## OTTAWA RIVER WORKS.

Ste. Anne's Lock, page 51.....	.....	\$1,170,215 63
Carillon and Grenville Canal, page 39.....	.....	4,182,092 96
Culbute Canal, page 42.....	.....	382,391 46
Rideau Canal, page 48.....	\$4,127,454 21	
Less expenditure by Imperial government.....	3,911,701 47	215,752 74
<hr/>		
Total Ottawa River Works (Capital).....	.....	\$5,950,452 79
Add expenditure on slides and booms prior to Confederation .....	\$719,247 13	
Add expenditure on slides and booms since Confederation .....	7,243 60	
Add expenditure on Chats Falls Canals prior to Confederation .....	482,950 81	
Add expenditure in 1881, charged to Miscellaneous, see page 229, part ii, Public Accounts .....	1,136 84	
Add amount transferred, see page xxxvi, Public Accounts Balance Sheet, 1881.....	233,555 85	
<hr/>		1,444,134 23
<hr/>		\$7,394,587 07
Less expenditure prior to Confederation, transferred to Income Account.....	\$320,618 28	
Less expenditure in 1872, on Carillon and Grenville Canal, as shown in Public Accounts Balance Sheet, page xx, under Miscellaneous .....	165,257 28	
<hr/>		485,875 56
<hr/>		
Agreeing, less outstanding cheques, with Balance Sheet, Public Accounts, 1913, page 4.....		\$6,908,711 46
<hr/>		

W. C. LITTLE,  
*Accountant.*

Department of Railways and Canals,  
Ottawa, August 1, 1913.



## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## SAULT STE. MARIE CANAL.

	Year ending:	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation.	1868				
" " " "	1869				
" " " "	1870				
" " " "	1871				
" " " "	1872		949 35		
" " " "	1873				
" " " "	1874				
" " " "	1875				
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" " " "	1886				
" " " "	1887				
" " " "	1888	8,145 06			
" " " "	1889	34,018 95			
" " " "	1890	176,568 55			
" " " "	1891	325,336 33			
" " " "	1892	341,474 31			
" " " "	1893	589,801 25			
" " " "	1894	1,316,529 29			
" " " "	1895	466,151 50		3,432 73	
" " " "	1896	189,986 59		16,074 70	2,650 17
" " " "	1897	209,561 82		15,381 59	7,671 79
" " " "	1898	21,004 56		14,389 92	8,172 09
" " " "	1899	63,935 48		13,840 24	6,564 40
" " " "	1900	27,157 98		13,901 40	13,219 87
" " " "	1901	323,353 93	48 39	13,730 93	10,289 18
" " " "	1902	122,505 73		15,920 80	14,839 71
" " " "	1903	65,933 43		16,077 22	10,855 70
" " " "	1904	32,029 54		14,653 35	9,491 44
" " " "	1905	110,181 69		15,681 55	14,776 33
" " " "	1906	120,000 00		15,878 11	20,086 15
" " " "	1907	95,504 63		12,290 94	11,520 53
" " " "	1908	140,433 22		20,345 38	23,206 00
" " " "	1909	42,109 63	11,453 28	15,231 79	16,462 29
" " " "	1910	46,809 13	147,147 52	19,976 64	20,300 77
" " " "	1911	54,797 37	77,066 45	24,951 49	19,387 74
" " " "	1912	18,227 10	29,706 21	27,054 50	28,798 51
" " " "	1913	45,941 17	13,726 84	27,588 62	26,762 40
Total . . . . .		*4,987,498 24	280,098 04	315,401 90	265,623 07

\* Agreeing with Public Accounts, 1913, page 4.

W. C. LITTLE,

*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## SOULANGES CANAL.

	Year ending	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation					
" since.	1868				
" " "	1869				
" " "	1870				
" " "	1871				
" " "	1872				
" " "	1873				
" " "	1874				
" " "	1875				
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" " "	1889				
" " "	1890				
" " "	1891				
" " "	1892	54,235 76			
" " "	1893	210,336 24			
" " "	1894	723,380 95			
" " "	1895	752,016 53			
" " "	1896	535,939 07			
" " "	1897	363,126 06			
" " "	1898	1,016,401 00			
" " "	1899	1,442,824 22			
" " "	1900	693,806 24		6,711 84	5,000 00
" " "	1901	462,626 36	115 00	25,154 78	5,888 77
" " "	1902	235,021 79		22,672 50	2,267 13
" " "	1903	248,929 10		31,987 06	10,362 23
" " "	1904	113,328 45	15,608 69	25,235 25	39,382 01
" " "	1905	34,202 71	30,406 25	25,432 49	21,174 84
" " "	1906	5,000 22	16,633 79	24,817 37	17,096 33
" " "	1907	13,508 88	3,216 29	19,964 04	15,604 71
" " "	1908	50,634 01	4,245 18	28,988 36	35,687 11
" " "	1909	17,795 79	12,363 78	32,324 20	34,802 37
" " "	1910	153,022 23	2,299 93	32,851 69	46,287 16
" " "	1911	102,699 69	3,999 58	32,283 03	37,532 93
" " "	1912	286,787 88	14,375 47	36,871 50	38,554 54
" " "	1913	180,816 28		38,080 18	27,221 50
Total		\$7,696,439 46	102,663 96	383,374 29	336,861 63

\*Included in total cost of St. Lawrence River and Canals. *see* page 52.W. C. LITTLE,  
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS.  
OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## STE. ANNE'S LOCK AND CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		134,456 51			
" " since	1868			778 16	432 47
" " " "	1869			1,062 96	1,873 51
" " " "	1870			1,136 54	1,280 36
" " " "	1871			1,285 84	1,539 02
" " " "	1872		1,939 46	1,106 80	1,393 63
" " " "	1873		540 11	2,199 64	1,264 40
" " " "	1874	12,753 27		2,614 90	7,208 63
" " " "	1875	32,627 71		1,859 20	4,506 68
" " " "	1876	24,935 85		1,952 14	4,033 72
" " " "	1877	30,003 08		1,982 65	1,756 93
" " " "	1878	14,618 85		2,057 32	541 95
" " " "	1879	22,113 02		2,202 03	3,259 70
" " " "	1880	3,054 68		2,152 57	1,704 71
" " " "	1881	69,042 76		2,553 02	3,257 92
" " " "	1882	193,158 36		2,611 30	2,343 99
" " " "	1883	172,959 93		2,569 86	3,448 83
" " " "	1884	142,006 25		2,775 32	2,725 49
" " " "	1885	93,679 57		2,618 60	4,042 04
" " " "	1886	129,681 67		2,611 90	5,803 01
" " " "	1887	45,276 08	6,054 10	2,537 41	1,499 96
" " " "	1888	18,910 55	1,372 59	2,505 61	1,380 75
" " " "	1889	24,786 33		2,569 22	1,730 79
" " " "	1890	6,151 14		2,571 04	1,525 51
" " " "	1891		8,173 69	2,505 69	1,503 56
" " " "	1892		25,471 61	2,571 28	1,666 21
" " " "	1893		6,521 88	2,581 08	2,800 03
" " " "	1894		3,497 56	2,640 00	2,799 63
" " " "	1895		3,694 33	2,508 14	3,025 91
" " " "	1896			2,495 54	4,993 89
" " " "	1897			2,357 51	1,688 12
" " " "	1898			1,904 10	1,699 44
" " " "	1899			1,920 12	1,997 96
" " " "	1900			1,840 51	2,679 21
" " " "	1901			1,895 89	3,999 02
" " " "	1902			1,994 52	3,015 97
" " " "	1903		1,984 39	2,072 17	4,684 42
" " " "	1904			2,292 94	2,244 13
" " " "	1905			2,151 01	6,091 44
" " " "	1906			2,259 16	2,294 86
" " " "	1907		2,449 96	1,595 62	901 47
" " " "	1908		2,501 42	2,248 29	1,693 63
" " " "	1909		199 67	2,292 19	4,290 57
" " " "	1910		2,339 76	2,267 60	2,446 28
" " " "	1911		2,880 93	2,315 34	2,628 91
" " " "	1912			2,770 51	2,738 40
" " " "	1913			2,769 63	2,298 26
Total		*1,170,215 63	69,621 46	100,562 87	122,735 32

\*Included in total cost of Ottawa River Works, see page 47.

Original Construction . . . . . \$ 134,456 51

Enlargement, including new lock . . . . . 1,035,759 12

\$ 1,170,215 63

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS.

OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## ST. LAWRENCE RIVER AND CANALS, SURVEYS, &amp;c.

	Year ending.	CHARGEABLE TO CAPITAL.				Chargeable to Income.
		North Channel.	River Reaches.	Galops Channel.	Total.	
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....					18,442 85	98,378 46
Government expenditure since Confederation.....	1868					
" " " " " "	1869					
" " " " " "	1870					
" " " " " "	1871					
" " " " " "	1872					
" " " " " "	1873				33,241 69	
" " " " " "	1874				26,541 30	
" " " " " "	1875				20,611 36	
" " " " " "	1876				50,215 47	
" " " " " "	1877				47,377 31	
" " " " " "	1878				5,570 46	
" " " " " "	1879				9,265 77	
" " " " " "	1880				9,214 56	
" " " " " "	1881				6,927 96	
" " " " " "	1882		6,933 45	22,000 00	28,933 45	
" " " " " "	1883		3,574 31	41,300 00	44,874 31	
" " " " " "	1884		15,546 03	74,300 00	89,846 03	
" " " " " "	1885		13,710 17	101,400 00	115,110 17	
" " " " " "	1886		16,251 73	99,800 00	116,051 73	
" " " " " "	1887		20,037 31	54,400 00	74,437 31	
" " " " " "	1888		16,082 85	40,400 00	56,482 85	
" " " " " "	1889		1,293 92	17,200 00	18,493 92	
" " " " " "	1890		18,279 91	5,700 00	23,979 91	
" " " " " "	1891		35,137 25		35,137 25	
" " " " " "	1892		59,779 31		59,779 31	
" " " " " "	1893		52,643 39		52,643 39	
" " " " " "	1894		13,721 66		13,721 66	
" " " " " "	1895		1,223 72	181,552 03	182,775 75	
" " " " " "	1896		7,457 05		7,457 05	
" " " " " "	1897		12,347 31		12,347 31	
" " " " " "	1898	171,336 65	7,491 11	32,710 00	211,537 76	
" " " " " "	1899	461,979 50	9,366 47	42,430 00	513,775 97	
" " " " " "	1900	225,000 00	72,484 41	50,000 00	347,484 41	
" " " " " "	1901	184,790 34	19,389 75	91,211 97	295,392 06	
" " " " " "	1902	125,000 00	29,268 64	24,037 85	178,306 49	
" " " " " "	1903	126,833 94	16,432 28	25,000 00	168,266 22	
" " " " " "	1904	68,595 42	9,634 66	6,450 00	84,680 08	
" " " " " "	1905	93,025 89	25,743 51	49,734 70	168,504 10	
" " " " " "	1906	83,028 98		26,506 26	109,535 24	
" " " " " "	1907	61,528 34		13,350 00	74,878 34	
" " " " " "	1908	40,500 00		12,976 77	53,476 77	
" " " " " "	1909	42,770 45		25,378 21	68,148 66	
" " " " " "	1910	34,389 32		2,057 86	36 447 18	13,694 97
" " " " " "	1911					16,224 68
" " " " " "	1912					
" " " " " "	1913					
Total.....		1,718,778 83	483,830 20	1,039,895 65	3,469,913 41*	128,298 11

\* In this total is included an expenditure on capital account of \$227,408.73 on the St. Lawrence River and Canals for the period previous to 1882.

## ST. LAWRENCE RIVER AND CANALS, SURVEYS, &amp;c.

St. Lawrence River and Canals, as above .....	\$ 3,469,913 41
Beauharnois Canal, <i>see</i> page 38 .....	1,636,690 26
Cornwall Canal " 41. ....	7,242,804 21
Williamsburg Canal " 58 and 59. ....	10,490,184 51
Lake St. Louis " 45. ....	298,176 11
Soulanges Canal " 50. ....	7,696,439 46
Lachine Canal, prior to Confederation to June 30, 1875, <i>see</i> page 43. ....	2,950,104 15
Lake St. Francis, <i>see</i> page 44. ....	75,906 71

Agreeing with Public Accounts balance, 1913, page 4. .... \$ 33,860,218 82

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, August 1, 1913.

W. C. LITTLE,

Accountant.

## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## ST. OURS LOCK.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation .....		121,537 65			
" since .....	1868			1,532 75	753 74
" .....	1869			1,755 15	1,399 18
" .....	1870			1,458 09	1,006 22
" .....	1871			1,414 48	1,210 98
" .....	1872			1,565 80	1,263 19
" .....	1873			2,076 50	1,575 10
" .....	1874			2,219 13	2,363 42
" .....	1875			1,362 22	1,245 69
" .....	1876			1,403 92	1,601 71
" .....	1877			1,533 40	750 80
" .....	1878			1,556 65	283 77
" .....	1879			1,581 55	456 07
" .....	1880			1,614 01	705 54
" .....	1881			1,741 97	1,299 77
" .....	1882			2,002 71	1,902 41
" .....	1883		17,230 32	2,361 65	2,188 08
" .....	1884		5,279 87	2,315 37	1,494 99
" .....	1885		4,700 64	2,271 37	3,652 63
" .....	1886			2,311 70	4,143 47
" .....	1887			2,175 37	5,864 78
" .....	1888			2,216 04	2,801 17
" .....	1889		17,964 45	2,421 14	2,002 63
" .....	1890		24,571 96	2,138 40	1,935 44
" .....	1891		21,696 74	2,011 08	4,460 16
" .....	1892		3,585 34	2,168 44	1,944 33
" .....	1893			2,136 66	1,994 34
" .....	1894			2,216 68	924 55
" .....	1895			2,161 63	915 50
" .....	1896			2,094 91	1,678 49
" .....	1897			2,135 60	707 06
" .....	1898			2,049 67	692 04
" .....	1899			2,244 12	1,494 93
" .....	1900		1,596 88	2,181 43	2,681 10
" .....	1901		3,610 06	2,128 25	1,681 44
" .....	1902		15,549 27	2,262 39	984 36
" .....	1903		9,344 89	2,288 63	1,671 83
" .....	1904		7,984 41	2,334 67	1,690 61
" .....	1905		14,900 90	2,479 66	1,716 35
" .....	1906		7,307 39	2,582 95	3,872 75
" .....	1907		4,260 00	2,064 62	1,142 79
" .....	1908		3,338 79	2,894 76	2,121 43
" .....	1909			2,994 78	3,693 19
" .....	1910		1,925 08	4,137 64	1,752 66
" .....	1911		1,200 23	3,527 69	2,353 81
" .....	1912		4,306 28	3,584 10	2,259 46
" .....	1913		2,678 37	3,530 02	2,449 44
Total .....		*125,843 93	172,664 17	101,239 95	86,783 40

\* Included in the total cost of Chambly Canal and Richelieu River, *see* page 40.

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## ST. PETER'S CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		156,523 32			
" " since	1868	21,519 72			
" " " "	1869	70,719 80			
" " " "	1870		46,193 57		
" " " "	1871			225 36	555 78
" " " "	1872			280 00	6,122 07
" " " "	1873			343 32	6,539 58
" " " "	1874			725 93	1,558 57
" " " "	1875	20 97		560 00	882 35
" " " "	1876	11,125 00		641 55	
" " " "	1877	63,330 18		600 00	17 45
" " " "	1878	26,511 51		600 00	
" " " "	1879	107,337 75		631 50	
" " " "	1880	80,129 54		400 00	
" " " "	1881	69,434 76		959 58	
" " " "	1882	484 00		1,920 54	200 63
" " " "	1883			2,089 19	232 42
" " " "	1884	2,471 40		2,601 47	367 85
" " " "	1885	16,820 15		1,929 11	183 11
" " " "	1886	2,316 85		2,360 67	297 81
" " " "	1887	1,087 75	750 00	2,777 13	343 23
" " " "	1888			3,217 77	1,588 40
" " " "	1889		500 00	3,085 29	353 38
" " " "	1890			3,110 15	255 34
" " " "	1891	972 65	510 53	3,255 30	312 02
" " " "	1892	14,387 00	30,936 82	3,067 70	1,461 24
" " " "	1893	811 59	9,987 78	2,938 15	1,856 30
" " " "	1894	437 05	3,852 21	2,935 94	1,986 70
" " " "	1895	868 44	26,222 46	2,499 81	353 55
" " " "	1896	1,455 21	16,743 64	2,182 04	260 90
" " " "	1897			2,728 38	1 20
" " " "	1898		111 70	2,785 25	453 85
" " " "	1899			2,819 86	456 61
" " " "	1900			2,833 24	1,483 30
" " " "	1901		2,311 26	2,730 44	841 63
" " " "	1902		10,014 43	2,939 81	274 44
" " " "	1903			2,836 49	764 11
" " " "	1904			3,126 94	122 45
" " " "	1905		3,000 10	2,969 90	1,095 90
" " " "	1906			3,239 19	253 65
" " " "	1907			2,468 78	246 87
" " " "	1908			3,371 13	942 64
" " " "	1909			3,282 22	532 78
" " " "	1910			3,449 43	238 14
" " " "	1911			4,180 96	473 44
" " " "	1912		5,208 18	4,768 20	361 49
" " " "	1913		39,143 77	5,144 13	807 78
		648,755 64			
Less—Refunds in 1897-8.		208 50			
Total		*648,547 14	195,486 45	101,551 85	35,085 96

\* Expenditure as above. . . . . \$ 648,547 14  
 Less expenditure prior to Confederation. . . . . 156,523 32

Agreeing with Public Accounts, 1913, page 4. . . . . \$ 492,023 82

W. C. LITTLE,  
*Accountant.*

## SESSIONAL PAPER No. 20

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## TAY CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure since Confederation .	1868	.....	.....	.....	.....
" " " "	1869	.....	.....	.....	.....
" " " "	1870	.....	.....	.....	.....
" " " "	1871	.....	.....	.....	.....
" " " "	1872	.....	.....	.....	.....
" " " "	1873	.....	.....	.....	.....
" " " "	1874	.....	.....	.....	.....
" " " "	1875	.....	.....	.....	.....
" " " "	1876	.....	.....	.....	.....
" " " "	1877	.....	.....	.....	.....
" " " "	1878	.....	.....	.....	.....
" " " "	1879	.....	.....	.....	.....
" " " "	1880	.....	.....	.....	.....
" " " "	1881	.....	.....	.....	.....
" " " "	1882	.....	748 65	.....	.....
" " " "	1883	4,831 80	.....	.....	.....
" " " "	1884	50,878 12	.....	.....	.....
" " " "	1885	92,473 97	.....	.....	.....
" " " "	1886	55,561 51	.....	.....	.....
" " " "	1887	49,617 92	.....	.....	.....
" " " "	1888	54,166 57	.....	.....	.....
" " " "	1889	89,486 18	.....	.....	.....
" " " "	1890	22,226 23	.....	*	*
" " " "	1891	17,114 78	.....	*	*
" " " "	1892	29,771 65	.....	*	*
" " " "	1893	.....	.....	*	*
" " " "	1894	.....	.....	*	*
" " " "	1895	.....	.....	*	*
" " " "	1896	.....	.....	*	*
" " " "	1897	10,720 50	.....	*	*
" " " "	1898	.....	.....	*	*
" " " "	1899	.....	.....	*	*
" " " "	1900	2,750 00	.....	*	*
" " " "	1901	.....	.....	*	*
" " " "	1902	.....	.....	*	*
" " " "	1903	.....	.....	*	*
" " " "	1904	.....	.....	*	*
" " " "	1905	.....	.....	*	*
" " " "	1906	.....	.....	*	*
" " " "	1907	.....	.....	*	*
" " " "	1908	.....	.....	*	*
" " " "	1909	.....	.....	*	*
" " " "	1910	.....	.....	*	*
" " " "	1911	.....	.....	*	*
" " " "	1912	.....	.....	*	*
" " " "	1913	.....	.....	*	*
Total.....		†489,599 23	748 65	*	*

\* Included in Rideau Canal since 1890.

† Agreeing with Public Accounts, 1913, page 4.

W. C. LITTLE,  
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS.  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the amounts expended on Construction, Renewals, &c.—*Continued.*

## TRENT CANAL.

	Year ending.	Capital.	Renewals Chargeable to Income.	Staff.	Repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		309,371 31			
" since	1868				
"	1869				
"	1870				
"	1871				
"	1872				
"	1873				
"	1874				
"	1875				
"	1876				
"	1877				
"	1878				
"	1879				
"	1880	561 50		1,188 92	3,568 89
"	1881			2,489 93	2,233 50
"	1882		5,836 51	2,011 92	8,115 50
"	1883	40,767 16	9,303 66	2,235 50	3,047 42
"	1884	120,393 91	6,198 57	2,208 64	5,264 35
"	1885	121,382 84		3,303 87	4,653 50
"	1886	75,103 30		1,639 75	5,917 88
"	1887	179,541 63		1,938 08	6,008 88
"	1888	114,879 35		1,770 29	5,151 42
"	1889	47,592 13	29,677 92	3,242 05	5,935 94
"	1890	58,644 50	11,522 65	3,450 99	730 55
"	1891	9,826 49	3,164 81	3,803 66	4,888 98
"	1892	4,457 28	6,506 97	3,695 85	4,721 85
"	1893	5,962 47	10,838 90	3,739 86	2,087 17
"	1894	3,412 32	20,403 93	3,785 47	4,988 59
"	1895	53,907 70	21,143 41	4,184 18	3,374 49
"	1896	392,976 08	6,185 75	4,349 34	3,329 97
"	1897	486,575 70	13,880 37	4,965 39	3,497 90
"	1898	351,273 31	8,991 54	5,034 60	4,998 80
"	1899	166,611 49	6,179 79	5,048 72	6,454 49
"	1900	334,583 01	8,043 39	5,131 52	9,989 26
"	1901	284,503 89	10,494 82	5,254 51	13,075 89
"	1902	449,075 45	26,165 93	5,575 52	14,984 88
"	1903	523,950 74	18,548 58	6,993 25	10,791 15
"	1904	489,038 44	21,228 55	7,237 05	21,179 12
"	1905	333,261 75	36,853 28	12,071 88	26,056 78
"	1906	319,789 49	26,030 36	17,440 68	33,398 85
"	1907	153,045 42	35,360 10	19,229 25	36,516 47
"	1908	343,176 05	96,315 87	32,826 38	33,382 94
"	1909	1,099,836 38	80,517 65	32,028 57	44,849 83
"	1910	1,000,000 00	59,483 51	36,800 42	54,206 13
"	1911	1,682,449 32	78,914 08	38,019 33	40,178 54
"	1912	1,746,095 48	97,254 20	44,811 08	50,175 72
"	1913	1,162,605 75	41,499 98	47,431 26	50,049 83
Total	..... *	12,464,651 64	796,545 08	374,937 71	527,805 46

\* Total expenditure on Capital Account as above.....\$12,464,651 64  
 LESS—Expenditure prior to Confederation.....\$ 309,371 31  
 " Year 1880.....561 50  
 309,932 81

Agreeing with Public Accounts Balance Sheet, 1913, page 4.....\$12,154,718 83

W. C. LITTLE,

*Accountant.*



STATEMENT showing the amounts expended on Construction, Renewals, &c—Continued.  
WILLIAMSBURG CANAL.

	Year ending.	CAPITAL.						Renewals Chargeable to Income.	Staff.	Repairs.			
		Farran's Point.		Galeys.		Rapid Plat.					Total.		
		\$	cts.	\$	cts.	\$	cts.					\$	cts.
Government expenditure prior to Confederation being amount of original construction.....	1868							1,320,655 54			\$	cts.	
Government expenditure since Confederation.....	1869										5,745 97	6,442 41	
"	1870										5,769 81	5,670 88	
"	1871										5,573 13	5,546 16	
"	1872										6,382 17	5,308 41	
"	1873										5,542 94	3,230 07	
"	1874										6,424 49	7,347 75	
"	1875										6,857 19	7,395 92	
"	1876										6,547 62	4,110 29	
"	1877										7,418 39	11,690 98	
"	1878										7,388 68	10,053 61	
"	1879										7,430 11	4,449 78	
"	1880										7,517 20	3,549 71	
"	1881										7,590 15	3,999 77	
"	1882										7,572 35	5,020 73	
"	1883										7,589 44	7,447 69	
"	1884										7,423 48	7,239 39	
"	1885										7,637 04	7,849 37	
"	1886										7,636 67	8,198 03	
"	1887										7,671 54	7,847 05	
"	1888										7,635 54	7,904 76	
"	1889										7,646 79	8,190 13	
"	1890										7,485 28	8,794 61	
"	1891										8,954 53	8,191 69	
"	1892										8,678 25	7,987 40	
"	1893										9,458 33	8,551 32	
"	1894										8,676 03	8,347 97	
"	1895										10,230 09	7,029 95	
"	1896										9,675 09	7,871 37	
"	1897										9,588 51	9,036 00	
"	1898										8,697 54	8,210 71	
"	1899										10,708 66	8,03 84	

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1899	346,456 54	987,186 44	57,869 18	1,392,012 16	7,410 00	9,960 64	10,000 00
1900	100,534 64	752,799 27	14,298 74	897,632 65	4,137 04	11,060 66	10,897 79
1901	111,158 39	390,112 78	76,501 57	577,472 74	.....	12,342 32	11,753 09
1902	42,269 89	421,945 81	137,818 22	601,973 92	.....	14,463 28	13,673 26
1903	10,295 92	320,354 92	18,483 34	349,105 18	.....	15,246 91	20,062 79
1904	18,700 00	256,536 30	26,774 27	392,010 57	1,978 85	20,570 17	19,430 05
1905	8,108 99	292,337 29	8,109 98	308,556 26	5,573 69	23,339 45	21,492 46
1906	.....	140,920 65	.....	140,920 65	20,403 00	17,280 42	16,148 66
1907	.....	45,782 52	734 91	46,357 43	18,405 65	13,953 58	8,501 57
1908	.....	100,312 81	.....	100,312 81	16,635 15	13,441 86	18,563 82
1909	.....	11,987 59	.....	11,987 59	3,744 50	22,638 02	23,494 80
1910	.....	.....	.....	.....	.....	20,682 88	20,645 76
1911	.....	.....	.....	3,200 00	2,622 39	21,893 61	21,481 75
1912	.....	.....	.....	1,372 82	43,965 21	25,753 98	26,875 25
1913	.....	1,372 82	.....	.....	88,974 46	32,269 54	28,214 13
Total	877,090 57	6,120,300 14	2,158,242 00	70,490 184 51	247,311 60	520,270 13	501,033 93

\* Original construction..... \$ 1,320,655 54  
Cost of enlargement..... 9,169,528 97

Total..... \$10,490,184 51

Included in total cost of St. Lawrence River and Canals, see page 52.

W. C. LITTLE,  
*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing amount expended on Construction and Enlargement of Canals, to  
March 31, 1913.

Canal.	Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Beauharnois.....	1,636,690 26		1,636,690 26
Carillon and Grenville.....	*63,053 64	4,119,039 32	4,182,092 96
Chambly.....	637,214 66	91,784 83	728,999 49
Cornwall.....	1,945,624 73	5,297,179 48	7,242,804 21
Culbute.....	382,391 46		382,391 46
Lachine.....	2,589,532 85	10,815,438 11	13,404,970 96
Lake St. Francis.....		75,906 71	75,906 71
Lake St. Louis.....		298,176 11	298,176 11
Murray.....	1,248,946 71		1,248,946 71
Rideau.....	4,127,454 21		4,127,454 21
Sault Ste. Marie.....	4,987,498 24		4,987,498 24
Soulanges.....	7,696,439 46		7,696,439 46
Ste. Anne's.....	134,456 51	1,035,759 12	1,170,215 63
St. Lawrence River and Canals.....	18,442 85	3 451,470 56	3,469,913 41
St. Ours.....	121,537 65	4,306 28	125,843 93
St. Peter's.....	648,547 14		648,547 14
Tay.....	489,599 23		489,599 23
Trent.....	12,464,651 64		12,464,651 64
Welland.....	7,693,824 03	21,557,126 93	29,250,951 01
Williamsburg. { Farran's Point.....		877,090 57	10,490,184 51
Galops.....		6,120,300 14	
Rapide Plat.....		2,158,242 00	
Williamsburg.....	1,320,655 54	13,896 26	
Total.....	48,206,560 81	55,915,716 47	104,122,277 28

\* Construction by Imperial Government not included. Records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

W. C. LITTLE,  
*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

## RECAPITULATION.\*

YEARLY Expenditure on Canals and Revenue received to March 31, 1913.

	Year ending.	Capital.	Income.	Staff.	Repairs.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation, in- cluding Imperial Govern- ment expenditure.....		20,593,866 13	98,378 46			
Government expenditure since Confederation. ...	1868	33,784 06	95,347 79	113,084 50	101,646 44	403,879 19
" "	1869	126,898 20	55 00	116,069 76	118,579 31	400,263 32
" "	1870		90,355 96	120,403 02	150,176 70	414,687 02
" "	1871		116,429 54	135,040 81	140,467 52	488,538 76
" "	1872	255,645 75	33,289 27	124,137 09	152,086 25	466,847 52
" "	1873	256,547 27	127,369 55	148,581 18	186,573 13	486,433 26
" "	1874	1,189,591 91	51,037 05	167,194 40	213,613 86	510,755 99
" "	1875	1,714,830 37	479 00	168,401 21	203,226 85	414,979 59
" "	1876	2,388,733 46	810 75	178,411 80	190,578 45	390,337 04
" "	1877	4,131,374 30	22 30	179,661 40	138,448 51	390,837 37
" "	1878	3,843,338 62		187,521 31	122,251 60	373,814 17
" "	1879	3,064,098 61		191,892 44	115,349 99	337,675 13
" "	1880	2,123,366 34		195,039 33	147,167 52	341,598 14
" "	1881	2,075,891 65	7,246 69	197,573 62	154,653 63	361,558 17
" "	1882	1,593,174 09	55,025 03	224,572 61	187,399 02	325,231 54
" "	1883	1,763,901 97	62,503 14	269,415 01	178,617 86	361,604 01
" "	1884	1,577,295 42	60,993 99	280,637 29	192,219 38	372,561 69
" "	1885	1,504,621 47	58,298 29	280,226 20	201,708 47	321,289 47
" "	1886	1,333,324 80	31,984 02	282,323 63	198,251 97	328,977 43
" "	1887	1,783,698 16	65,983 06	285,172 62	198,888 84	321,784 88
" "	1888	1,033,118 34	120,561 59	292,458 76	201,928 93	317,902 04
" "	1889	972,918 43	162,015 49	301,040 23	240,261 36	333,188 90
" "	1890	1,026,364 24	146,853 54	290,516 63	176,089 00	354,816 92
" "	1891	1,318,092 15	165,843 87	294,562 12	204,768 45	349,431 90
" "	1892	1,437,149 30	194,129 61	293,115 58	231,089 54	324,475 24
" "	1893	2,069,373 30	196,185 84	291,048 97	204,759 39	357,089 87
" "	1894	3,027,164 19	110,512 07	294,446 34	179,630 13	387,788 97
" "	1895	2,452,273 65	216,057 58	281,477 04	164,033 71	330,890 49
" "	1896	2,258,778 97	85,820 49	292,121 05	209,321 60	339,538 72
" "	1897	2,348,636 91	101,205 74	287,970 36	178,385 47	384,780 53
" "	1898	3,207,249 79	82,400 55	280,872 44	203,478 86	407,652 81
" "	1899	3,899,877 31	82,205 60	280,628 57	202,312 36	369,044 38
" "	1900	2,639,564 93	120,653 93	292,609 24	227,626 97	322,642 86
" "	1901	2,360,569 89	135,500 57	314,095 04	262,876 07	315,425 69
" "	1902	2,114,689 88	213,044 91	317,838 61	263,768 27	300,413 68
" "	1903	1,823,273 61	275,103 58	390,281 82	294,113 92	230,213 15
" "	1904	1,880,787 20	298,678 23	381,016 82	350,278 54	79,536 51
" "	1905	2,071,593 72	352,855 43	431,499 60	401,742 79	78,009 21
" "	1906	1,552,121 21	310,716 70	447,962 92	375,889 60	108,067 76
" "	1907	887,838 61	254,423 18	329,629 63	287,231 03	105,003 15
" "	1908	1,708,156 37	483,250 11	473,638 95	411,660 53	144,882 13
" "	1909	1,868,834 45	699,304 73	475,515 04	433,958 10	199,501 26
" "	1910	1,650,706 64	459,835 62	515,585 16	491,793 02	193,384 28
" "	1911	2,349,474 49	385,534 55	511,305 94	471,530 32	221,138 49
" "	1912	2,554,938 91	384,860 73	585,899 54	555,709 95	264,114 48
" "	1913	2,255,448 21	292,960 26	605,248 57	535,135 66	307,567 66
Total .....		104,122,277 28	7,286,123 39	13,397,764 20	11,051,278 87	14,949,174 77

\* This does not include expenditure which has been charged to Canals General but only the amount expended on specified canals.

† Canal tolls abolished this year.

W. C. LITTLE,  
Accountant.

DEPARTMENT OF RAILWAYS AND CANAL,  
OTTAWA, August 1, 1913.





4 GEORGE V., A. 1914

GENERAL STATEMENT of the Revenue received on the Canals for the year ending  
March 31, 1913.\*

Canals.	Hydraulic and other rents.	Lock house rents.	Miscellaneous Canal revenue.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Welland .....	49,892 09	580 00	61,229 70	111,701 79
Williamsburg.....	2,770 00	311 00	26 30	3,107 30
Cornwall.....	8,835 75		1,728 19	10,563 94
Beauharnois.....	14,944 89			14,944 89
Lachine .....	128,687 86	196 74	15,690 19	144,574 79
Chambly.....	117 00	594 50		711 50
Rideau.....	3,561 75	1,949 00	588 00	6,098 75
Trent.....	9,566 51	1,300 00		10,866 51
Sault Ste. Marie.....	513 49			513 49
Carillon and Grenville.....	385 00	191 20		576 20
Soulanges.....	3,107 00	391 00	78 00	3,576 00
Sundry Canals.....	24 50	308 00		332 50
	222,405 84	5,821 44	79,340 38	307,567 66

*Amount deposited to the Credit of the Receiver General.....	\$	309,072 10	
Less Refunds on Cancelled Leases.....		1,504 44	\$ 307,567 66
Net amount of Revenue.....			\$ 307,567 66

W. C. LITTLE,  
*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

## STATEMENT OF Hydraulic and other rents, showing rent accrued, paid and balances yet due March 31, 1913.

Balance due April 1, 1912.	Hydraulic rents accrued 1912-13.		Lock House rents.		Totals.		Canals.		Abatement for overcharges		Deposited to the credit of the Receiver General.		Balance due March 31, 1913		Totals.	
\$ cts.	\$	cts.	\$	cts.	\$	cts.			\$	cts.	\$	cts.	\$	cts.	\$	cts.
83,226 28	56,908 51		580 00		140,714 79		Welland .....		17,431 57		49,892 09		72,811 13		140,714 79	
5,303 17	3,429 00		311 00		9,043 17		..... Williamsburg .....		1 00		2,770 00		5,961 17		9,043 17	
4,799 12	7,005 50				12,404 62		..... Cornwall .....				8,835 75		3,568 87		12,404 62	
7,256 19	14,866 54				22,122 73		..... Beauharnois .....				14,944 89		7,177 84		22,122 73	
37,148 01	125,386 53		196 74		162,731 28		..... LaCachine .....		1,676 97		128,687 86		32,163 71		162,731 28	
835 84	118 00		594 50		1,598 34		..... Chambly .....				117 00		886 84		1,598 34	
6,329 95	4,301 50		1,949 00		12,580 45		..... Rideau .....		435 59		3,561 75		6,634 11		12,580 45	
1,367 80	9,222 18		1,300 00		11,889 98		..... Trent .....		40 14		9,566 51		983 33		11,889 98	
80 00	511 00				591 00		..... Sault Ste. Marie .....				513 49		77 51		591 00	
27,905 08	595 00		191 20		28,691 28		..... Carillon and Grenville .....				385 00		23,115 08		28,691 28	
	3,107 00		391 00		3,498 00		..... Soulanges .....				3,107 00				3,498 00	
11 00	41 00		308 00		360 00		..... Sundry Canals .....		22 50		24 50		5 00		360 00	
174,312 44	226,091 76		5,821 44		406,225 64		Totals .....		19,607 77		222,405 84		158,390 59		406,225 64	

W. C. LITTLE,  
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August, 1, 1913.

4 GEORGE V., A. 1914

RECAPITULATION—STATEMENT OF EXPENDITURE BY CANAL TO  
MARCH 31, 1913.

Canals.	Capital.	Income.	Staff.	Repairs.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Baie Verte.....		44,387 53			44,387 53
Beauharnois.....	1,636,690 26	265,810 84	649,574 89	525,691 23	3,077,767 22
Carillon and Grenville. . .	4,182,092 96	340,967 21	709,496 19	516,589 21	5,749,145 57
Chambly.....	728,999 49	727,097 75	841,414 37	787,829 80	3,085,341 41
Cornwall.....	7,242,804 21	518,415 99	1,303,103 20	822,141 38	9,886,466 78
Culbute Lock.....	382,391 46	60,923 37	11,507 48	7,036 15	461,858 46
Lachine.....	13,404,970 96	1,368,025 41	2,351,419 65	1,707,563 09	18,831,979 11
Lake St. Francis.....	75,966 71	25,043 68			100,950 39
Lake St. Louis.....	298,176 11				298,176 11
Murray.....	1,248,946 71	97,608 23	117,189 52	84,378 73	1,548,123 19
Rideau.....	4,127,454 21	489,520 51	1,481,031 84	1,403,878 63	7,501,885 19
Sault Ste. Marie.....	4,987,498 24	280,098 04	315,401 90	265,623 07	5,848,621 25
Soulanges.....	7,696,439 46	102,663 96	383,374 29	336,861 63	8,519,339 34
Ste. Anne's Lock.....	1,170,215 63	69,621 46	100,562 87	122,735 32	1,463,135 28
St. Lawrence Riv. and Canals	3,469,913 41	128,298 11			3,598,211 52
St. Ours' Lock.....	125,843 93	172,664 17	101,239 95	86,783 40	486,531 45
St. Peters'.....	648,547 14	195,486 45	101,551 85	35,085 96	980,671 40
Tay.....	489,599 23	748 65			490,347 88
Trent.....	12,464,651 64	796,545 08	374,937 71	527,805 46	14,163,939 89
Welland.....	29,250,951 01	1,354,885 35	4,035,686 36	3,320,241 88	37,961,764 60
Williamsburg.....	1,334,551 80				
"    Farran's Point.....	877,090 57	247 11 0	520,270 13	501,033 93	11,758,800 17
"    Galops.....	6,120,300 14				
"    Rapide Plat....	2,158,242 00				
	104,122,277 28	7,286,123 39	13,397,764 20	11,051,278 87	135,857,443 74
* Expendit. on Canals General.....					2,450,635 77
Total expenditure on Canals.....					138,308,079 51

\* See page 85.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

## ANNAPOLIS AND DIGBY RAILWAY.

	Year.	Capital.	Income Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation .....	1868		
"                    since .....	1869		
"                    " .....	1870		
"                    " .....	1871		
"                    " .....	1872		
"                    " .....	1873		
"                    " .....	1874		
"                    " .....	1875		
"                    " .....	1876		
"                    " .....	1877		
"                    " .....	1878		
"                    " .....	1879		
"                    " .....	1880		
"                    " .....	1881		
"                    " .....	1882		
"                    " .....	1883		
"                    " .....	1884		
"                    " .....	1885		
"                    " .....	1886		
"                    " .....	1887		
"                    " .....	1888		
"                    " .....	1889	9,847 27	
"                    " .....	1890	381,942 75	
"                    " .....	1891	196,869 36	
"                    " .....	1892	26,129 89	
"                    " .....	1893	2,190 62	
"                    " .....	1894	1,675 36	
"                    " .....	1895	570 55	
"                    " .....	1896		
"                    " .....	1897	41,457 29	
"                    " .....	1898		
"                    " .....	1899		
"                    " .....	1900		
"                    " .....	1901		8,381 82
"                    " .....	1902		
"                    " .....	1903		
"                    " .....	1904		
"                    " .....	1905		
"                    " .....	1906		
"                    " .....	1907		
"                    " .....	1908		
"                    " .....	1909		
"                    " .....	1910		
"                    " .....	1911		
"                    " .....	1912		
"                    " .....	1913		
Total .....		*660,683 09	8,381 82

\* Of this amount Parliament voted, under 52 Vic., chap. 8, the sum of \$500,000 as a subsidy to the Western Counties Railway, N.S.

W. C. LITTLE,  
Accountant.

4 GEORGE V., A. 1914

## CANADA EASTERN RAILWAY.

			Year.	Capital.
				\$ cts.
Government expenditure prior to Confederation.....				
"	since	"	1868	
"	"	"	1869	
"	"	"	1870	
"	"	"	1871	
"	"	"	1872	
"	"	"	1873	
"	"	"	1874	
"	"	"	1875	
"	"	"	1876	
"	"	"	1877	
"	"	"	1878	
"	"	"	1879	
"	"	"	1880	
"	"	"	1881	
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"	"	"	1891	
"	"	"	1892	
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"	"	"	1895	
"	"	"	1896	
"	"	"	1897	
"	"	"	1898	
"	"	"	1899	
"	"	"	1900	
"	"	"	1901	
"	"	"	1902	
"	"	"	1903	
"	"	"	1904	
"	"	"	1905	800,000 00
"	"	"	1906	
"	"	"	1907	
"	"	"	1908	19,000 00
"	"	"	1909	
"	"	"	1910	
"	"	"	1911	
"	"	"	1912	
"	"	"	1913	
Total.....				* 819,000 00

\* Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,  
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

W. C. LITTLE,  
*Accountant.*

## CAPE BRETON RAILWAY.

				Year.	Capital.		Working Expenses.	
					\$	cts.	\$	cts.
Government expenditure prior to Confederation.....				1868				
"	since	"		1869				
"	"	"		1870				
"	"	"		1871				
"	"	"		1872				
"	"	"		1873				
"	"	"		1874				
"	"	"		1875				
"	"	"		1876				
"	"	"		1877				
"	"	"		1878				
"	"	"		1879				
"	"	"		1880				
"	"	"		1881				
"	"	"		1882				
"	"	"		1883				
"	"	"		1884				
"	"	"		1885				
"	"	"		1886				
"	"	"		1887		76,501 89		
"	"	"		1888		689,450 50		
"	"	"		1889		1,083,276 60		
"	"	"		1890		1,170,523 62		
"	"	"		1891		521,441 62		
"	"	"		1892		99,936 96		
"	"	"		1893		59,982 74		
"	"	"		1894		158,770 61		
"	"	"		1895		*		
"	"	"		1896		*		
"	"	"		1897		405 00		
"	"	"		1898		389 60		
"	"	"		1899				
"	"	"		1900				
"	"	"		1901				
"	"	"		1902				
"	"	"		1903				
"	"	"		1904				
"	"	"		1905				
"	"	"		1906				
"	"	"		1907				
"	"	"		1908				
"	"	"		1909				
"	"	"		1910				
"	"	"		1911				
"	"	"		1912				
"	"	"		1913				
Total.....					\$3,860,679	14	†	

\* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.

† Included in total cost of Intercolonial Railway system, see page 75.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

## CARLETON BRANCH RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation .....			
"                    since.                      "	1868		
"                      "                      "	1869		
"                      "                      "	1870		
"                      "                      "	1871		
"                      "                      "	1872		
"                      "                      "	1873		
"                      "                      "	1874		
"                      "                      "	1875		
"                      "                      "	1876		
"                      "                      "	1877		
"                      "                      "	1878		
"                      "                      "	1879		
"                      "                      "	1880		
"                      "                      "	1881		
"                      "                      "	1882		
"                      "                      "	1883		
"                      "                      "	1884		
"                      "                      "	1885		
"                      "                      "	1886	85,610 69	
"                      "                      "	1887	2,299 62	
"                      "                      "	1888	500 17	
"                      "                      "	1889		
"                      "                      "	1890		
"                      "                      "	1891		
"                      "                      "	1892		
"                      "                      "	1893		
"                      "                      "	1894		
"                      "                      "	1895		
"                      "                      "	1896		
"                      "                      "	1897		
"                      "                      "	1898		
"                      "                      "	1899		
"                      "                      "	1900		
"                      "                      "	1901		
"                      "                      "	1902		
"                      "                      "	1903		
"                      "                      "	1904		
"                      "                      "	1905		
"                      "                      "	1906		
"                      "                      "	1907		
"                      "                      "	1908		
"                      "                      "	1909		
"                      "                      "	1910		
"                      "                      "	1911		
"                      "                      "	1912		
"                      "                      "	1913		
Total .....		88,410 48	
* Less amount received from city of St. John, N.B. ....		40,000 00	
		48,410 48	

\* Victoria, chap. 6, transferred the Carleton Branch Railway to the city of St. John, N.B., for the sum of \$40,000, which sum was paid in March, 1893, to the Receiver General.

W. C. LITTLE,

*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.



\* Included in Intercolonial Railway expenses. † Included in Intercolonial Railway revenue.  
‡ Included in total cost of Intercolonial Railway system, page 75.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

## HUDSON BAY RAILWAY.

				Year.	Capital.
					\$ cts.
Government expenditure prior to Confederation.....				1868	
"	since	"		1869	
"	"	"		1870	
"	"	"		1871	
"	"	"		1872	
"	"	"		1873	
"	"	"		1874	
"	"	"		1875	
"	"	"		1876	
"	"	"		1877	
"	"	"		1878	
"	"	"		1879	
"	"	"		1880	
"	"	"		1881	
"	"	"		1882	
"	"	"		1883	
"	"	"		1884	
"	"	"		1885	
"	"	"		1886	
"	"	"		1887	
"	"	"		1888	
"	"	"		1889	
"	"	"		1890	
"	"	"		1891	
"	"	"		1892	
"	"	"		1893	
"	"	"		1894	
"	"	"		1895	
"	"	"		1896	
"	"	"		1897	
"	"	"		1898	
"	"	"		1899	
"	"	"		1900	
"	"	"		1901	
"	"	"		1902	
"	"	"		1903	
"	"	"		1904	
"	"	"		1905	
"	"	"		1906	
"	"	"		1907	
"	"	"		1908	
"	"	"		1909	92,427 83
"	"	"		1910	53,042 63
"	"	"		1911	184,149 81
"	"	"		1912	159,632 00
"	"	"		1913	1,009,063 15
Total.....					1,588,315 42

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

## INTERCOLONIAL RAILWAY.

	Year.	Construction.	Income.	Working Expenses including Windsor Branch Ry.	Revenue received, including Windsor Branch Ry.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Expenditure prior to Confederation .....		10,766,725 54			
" since .....	1868	483,353 65		359,961 08	420,752 58
" .....	1869	282,615 18		387,548 47	455,022 76
" .....	1870	1,729,381 49		445,208 75	471,245 09
" .....	1871	2,916,782 13		442,993 31	565,713 52
" .....	1872	5,131,141 51		595,076 22	622,900 56
" .....	1873	5,201,450 37		1,011,892 60	703,458 26
" .....	1874	3,614,898 81		1,847,175 24	893,430 17
" .....	1875	3,426,099 55		1,532,589 62	861,593 43
" .....	1876	1,108,321 59		1,277,197 79	848,861 46
" .....	1877	1,318,352 19		1,661,673 55	1,154,445 35
" .....	1878	408,816 74		1,811,273 56	1,378,946 78
" .....	1879	226,639 19		2,010,183 22	1,294,099 69
" .....	1880	2,048,014 60		1,607,956 70	1,520,310 45
" .....	1881	608,732 80		1,780,353 53	1,777,856 76
" .....	1882	585,568 79		2,080,592 37	2,100,315 85
" .....	1883	1,616,632 96		2,383,477 20	2,395,034 99
" .....	1884	1,405,377 52		2,366,719 95	2,376,666 19
" .....	1885	1,195,363 08		2,460,229 87	2,392,605 00
" .....	1886	544,958 17		2,508,473 10	2,406,858 88
" .....	1887	823,070 86		2,854,158 91	2,621,337 41
" .....	1888	742,203 09		3,300,481 94	2,937,337 40
" .....	1889	655,228 13		3,174,785 19	2,923,736 46
" .....	1890	365,246 48		3,500,455 80	2,958,243 38
" .....	1891	79,929 34		3,691,275 65	3,007,630 51
" .....	1892	168,101 77		3,458,891 39	2,978,950 82
" .....	1893	228,984 79		3,062,207 45	3,099,815 20
" .....	1894	166,362 43		2,969,317 07	3,020,485 74
" .....	1895	327,034 51		2,964,940 98	2,979,795 59
" .....	1896	259,105 23		3,029,304 08	2,994,201 93
" .....	1897	145,142 00		2,936,789 71	2,906,631 25
" .....	1898	252,367 20	70,000 00	3,275,830 14	3,154,896 49
" .....	1899	1,081,929 94	210,000 00	3,478,559 30	3,775,558 08
" .....	1900	1,796,348 29		4,444,296 25	4,599,423 14
" .....	1901	3,633,836 57		5,477,285 30	5,019,497 76
" .....	1902	4,621,841 05		5,596,939 57	5,720,990 50
" .....	1903	2,254,296 68		6,214,496 38	6,366,884 53
" .....	1904	1,880,856 60		7,264,263 13	6,392,865 48
" .....	1905	3,937,621 93		8,535,689 91	6,833,561 50
" .....	1906	3,765,170 90		7,599,400 33	7,693,282 40
" .....	1907	1,506,209 26		6,045,597 15	6,293,751 52
" .....	1908	4,363,494 01		9,195,347 64	9,229,989 21
" .....	1909	3,867,232 16		9,364,256 10	8,583,100 79
" .....	1910	1,278,409 45		8,668,620 23	9,328,888 97
" .....	1911	762,869 06		9,613,774 77	9,911,974 83
" .....	1912	1,710,448 56		10,624,889 89	10,666,962 44
" .....	1913	2,391,987 53		12,009,953 31	12,052,729 39
Total .....		*87,684,523 68	280,000 00	180,046,381 70	172,692,640 49

\*Continued page 76.

\* Including \$296,872.90 paid to Nova Scotia Ry. and European and North American Ry., N.B., and charged to 'Consolidated Fund.'

† Expenditure for year .....	\$ 1,894,856 90
Less refunds of previous years .....	14,000 30
	<u>\$ 1,880,856 60</u>

‡ Expenditure for the year .....	\$ 3,760,942 95
Add refunded cheque of 1901-2 paid during fiscal year 1905-6 .....	4,227 95
	<u>\$ 3,765,170 90</u>

4 GEORGE V., A. 1914

INTERCOLONIAL RAILWAY—*Concluded.*

Total cost of construction as shown on page 75.....	†\$87,684,523 68
Less amounts transferred from Capital to Consolidated Fund as follows:—	
European and North American Railway from	
1868 to 1873 .....	\$ 88,363 18
Nova Scotia Railway from 1868 to 1873.....	208,509 72
	<hr/> 296,872 90
	<hr/> \$87,387,650 78
To which add the following—	
Canada Eastern Railway, page 68.....	819,000 00
Cape Breton Railway, page 70.....	3,860,679 14
Drummond County Railway, page 72.....	1,464,000 00
Eastern Extension Railway, page 73.....	1,324,042 81
Montreal and European Short Line Railway, page 77.....	333,942 72
Oxford and New Glasgow, page 79.....	1,949,063 21
Total capital cost of Intercolonial Railway System.....	<hr/> *\$97,138,378 66

\* Agreeing, less outstanding cheques, with Public Accounts, 1912-1913, page 4.

† Includes \$220.48, amount of an Exchequer Court award in 1907 against the Oxford and New Glasgow Railway.

W. C. LITTLE,  
*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

## MONTREAL AND EUROPEAN SHORT LINE RAILWAY.

				Year.	Construction.		Working Expenses.	
					\$	cts.	\$	cts.
Government expenditure prior to Confederation.....				1868				
"	since	"	"	1869				
"	"	"	"	1870				
"	"	"	"	1871				
"	"	"	"	1872				
"	"	"	"	1873				
"	"	"	"	1874				
"	"	"	"	1875				
"	"	"	"	1876				
"	"	"	"	1877				
"	"	"	"	1878				
"	"	"	"	1879				
"	"	"	"	1880				
"	"	"	"	1881				
"	"	"	"	1882				
"	"	"	"	1883				
"	"	"	"	1884				
"	"	"	"	1885		49,587 45		
"	"	"	"	1886		135,214 38		
"	"	"	"	1887		24,157 32		
"	"	"	"	1888		397 35		
"	"	"	"	1889				
"	"	"	"	1890				
"	"	"	"	1891		124,568 23		
"	"	"	"	1892				
"	"	"	"	1893				
"	"	"	"	1894		17 99		
"	"	"	"	1895				
"	"	"	"	1896				
"	"	"	"	1897				
"	"	"	"	1898				
"	"	"	"	1899				
"	"	"	"	1900				
"	"	"	"	1901				
"	"	"	"	1902				
"	"	"	"	1903				
"	"	"	"	1904				
"	"	"	"	1905				
"	"	"	"	1906				
"	"	"	"	1907				
"	"	"	"	1908				
"	"	"	"	1909				
"	"	"	"	1910				
"	"	"	"	1911				
"	"	"	"	1912				
"	"	"	"	1913				
Total.....					*333,942 72			

\* Included in total cost of Intercolonial Railway system, page 75.

W. C. LITTLE,  
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.



SESSIONAL PAPER No. 20

OXFORD AND NEW GLASGOW RAILWAY.

	Year.	Capital.	Working Expenses.
		\$ cts.	\$ cts.
Government expenditure prior to Confederation.....			
" since	1868		
"	1869		
"	1870		
"	1871		
"	1872		
"	1873		
"	1874		
"	1875		
"	1876		
"	1877		
"	1878		
"	1879		
"	1880		
"	1881		
"	1882		
"	1883		
"	1884		
"	1885		
"	1886		
"	1887		
"	1888	280,932 35	
"	1889	840,553 57	
"	1890	434,074 60	
"	1891	220,886 39	
"	1892	48,745 23	
"	1893	7,922 80	
"	1894	112,382 75	
"	1895	*	
"	1896	*	
"	1897	3,565 52	
"	1898		
"	1899		
"	1900		
"	1901		
"	1902		
"	1903		
"	1904		
"	1905		
"	1906		
"	1907	*	
"	1908		
"	1909		
"	1910		
"	1911		
"	1912		
"	1913		
Total .....		† 1,949,063 21	†

\* Included in Intercolonial Railway capital. † Included in Intercolonial Railway working expenses.

\* Included in total cost of Intercolonial Railway system, page 75. Add \$220.48 amount of Exchequer Court Award paid in 1907 and included in Intercolonial Ry.

W. C. LITTLE,  
*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

## PRINCE EDWARD ISLAND RAILWAY.

	Year.	Construction.	Working Expenses.	Revenue received.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation.....	1874	3,114,735 11		
"                    since                    ".....	1875		750 00	
"                    "                    ".....	1876	46,086 63	49,344 62	24,493 99
"                    "                    ".....	1877	42,546 10	219,930 43	118,060 96
"                    "                    ".....	1878	200,000 00	228,595 25	130,664 92
"                    "                    ".....	1879	6,551 86	221,599 49	135,899 60
"                    "                    ".....	1880	40,129 05	223,313 12	125,855 91
"                    "                    ".....	1881	16,539 82	164,640 55	113,851 11
"                    "                    ".....	1882		203,122 88	131,131 43
"                    "                    ".....	1883	402 03	228,259 97	137,267 54
"                    "                    ".....	1884	57,186 02	252,808 41	146,170 42
"                    "                    ".....	1885	130,663 38	236,428 13	144,604 12
"                    "                    ".....	1886	76,956 56	211,207 01	158,588 06
"                    "                    ".....	1887	4,668 33	216,744 34	155,584 36
"                    "                    ".....	1888	5,800 00	204,237 45	155,303 37
"                    "                    ".....	1889		229,639 95	158,363 62
"                    "                    ".....	1890		247,559 44	171,369 56
"                    "                    ".....	1891		266,485 85	160,971 78
"                    "                    ".....	1892	8,300 49	257,990 08	174,258 05
"                    "                    ".....	1893		289,706 38	157,442 69
"                    "                    ".....	1894		226,422 17	162,690 42
"                    "                    ".....	1895		226,891 06	158,533 83
"                    "                    ".....	1896		232,905 19	149,654 78
"                    "                    ".....	1897		225,138 56	146,476 54
"                    "                    ".....	1898		240,489 90	153,443 13
"                    "                    ".....	1899	17,541 88	231,418 74	158,950 61
"                    "                    ".....	1900	22,000 00	218,053 01	165,012 03
"                    "                    ".....	1901	53,546 02	220,931 81	174,738 73
"                    "                    ".....	1902	280,173 93	261,766 24	193,883 48
"                    "                    ".....	1903	475,997 94	270,159 97	197,999 93
"                    "                    ".....	1904	829,414 18	259,637 82	217,714 24
"                    "                    ".....	1905	698,877 47	335,695 44	234,390 03
"                    "                    ".....	1906	591,412 65	370,464 44	217,330 61
"                    "                    ".....	1907	496,124 89	294,253 16	257,270 57
"                    "                    ".....	1908	91,710 52	283,148 50	215,434 97
"                    "                    ".....	1909	390,461 83	399,947 79	304,579 83
"                    "                    ".....	1910	561,206 90	400,330 41	311,319 63
"                    "                    ".....	1911	206,396 97	427,283 73	319,074 74
"                    "                    ".....	1912	94,320 56	424,104 00	337,419 55
"                    "                    ".....	1913	128,041 91	449,962 91	367,203 39
"                    "                    ".....	1913	103,001 03	489,972 34	389,474 07
Total.....		*8,790,794 06	10,441,340 54	7,332,376 60

\* Agrees with Public Accounts Balance Sheet, 1912-1913, page 4.

W. C. LITTLE,  
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

SESSIONAL PAPER No. 20

## QUEBEC BRIDGE.

	Year.	Capital.		Income.	
		\$	cts.	\$	cts.
Government expenditure prior to Confederation.....	1868				
" since ".....	1869				
" ".....	1870				
" ".....	1871				
" ".....	1872				
" ".....	1873				
" ".....	1874				
" ".....	1875				
" ".....	1876				
" ".....	1877				
" ".....	1878				
" ".....	1879				
" ".....	1880				
" ".....	1881				
" ".....	1882				
" ".....	1883				
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" ".....	1892				
" ".....	1893				
" ".....	1894				
" ".....	1895				
" ".....	1896				
" ".....	1897				
" ".....	1898				
" ".....	1899				
" ".....	1900				
" ".....	1901				
" ".....	1902				
" ".....	1903				
" ".....	1904				
" ".....	1905				
" ".....	1906				
" ".....	1907				
" ".....	1908				
" ".....	1909			422,867	12
" ".....	1910			111,788	02
" ".....	1911	227,563	40		
" ".....	1912	603,293	07		
" ".....	1913	1,512,825	96		
Total.....		2,343,682	43	534,655	14
Less amount received from the Phoenix Bridge Co., 1910. ....				100,000	00
Total.....		2,343,682	43	434,655	14

W. C. LITTLE,  
Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

## YUKON TERRITORY WORKS.

(Stikine-Teslin Railway.)

			Year.	Construction.
				\$ cts.
Government expenditure prior to Confederation .....			1868	.....
" since .....	"	"	1869	.....
" .....	"	"	1870	.....
" .....	"	"	1871	.....
" .....	"	"	1872	.....
" .....	"	"	1873	.....
" .....	"	"	1874	.....
" .....	"	"	1875	.....
" .....	"	"	1876	.....
" .....	"	"	1877	.....
" .....	"	"	1878	.....
" .....	"	"	1879	.....
" .....	"	"	1880	.....
" .....	"	"	1881	.....
" .....	"	"	1882	.....
" .....	"	"	1883	.....
" .....	"	"	1884	.....
" .....	"	"	1885	.....
" .....	"	"	1886	.....
" .....	"	"	1887	.....
" .....	"	"	1888	.....
" .....	"	"	1889	.....
" .....	"	"	1890	.....
" .....	"	"	1891	.....
" .....	"	"	1892	.....
" .....	"	"	1893	.....
" .....	"	"	1894	.....
" .....	"	"	1895	.....
" .....	"	"	1896	.....
" .....	"	"	1897	.....
" .....	"	"	1898	.....
" .....	"	"	1899	.....
" .....	"	"	1900	.....
" .....	"	"	1901	.....
" .....	"	"	1902	283,323 55
" .....	"	"	1903	.....
" .....	"	"	1904	.....
" .....	"	"	1905	.....
" .....	"	"	1906	.....
" .....	"	"	1907	.....
" .....	"	"	1908	.....
" .....	"	"	1909	.....
" .....	"	"	1910	.....
" .....	"	"	1911	.....
" .....	"	"	1912	.....
" .....	"	"	1913	.....
Total. ....				*283,323 55

\* Included in Public Accounts Balance Sheet, 1902-1903, page 6.

W. C. LITTLE,  
Accountant.DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

STATEMENT showing amount expended on Capital Account on Railways.

Railways.	—		—	
	\$	cts.	\$	cts.
Intercolonial .....	87,387,650	78		
Cape Breton .....	3,860,679	14		
Oxford and New Glasgow .....	1,949,063	21		
Eastern Extension .....	1,324,042	81		
Drummond County .....	1,464,000	00		
Montreal and European Short Line .....	333,942	72		
Canada Eastern .....	819,000	00		
<b>Total.</b> .....			97,138,378	66
Carleton Branch .....			48,410	48
Prince Edward Island .....			8,790,794	06
Canadian Pacific .....			62,789,776	09
Annapolis and Digby .....			660,683	09
Yukon Territory Works (Stikine-Teslin Ry) .....			283,323	55
National Transcontinental .....			130,300,684	92
Governor General's Car .....			71,538	87
Hudson Bay Railway .....			1,588,315	42
<b>Total.</b> .....			301,671,905	09
<i>Memo re Recapitulation—Railway.</i>				
Total cost as per statement above .....			301,671,905	09
Add amounts transferred from Capital to Consolidated Fund, Intercolonial Railway, <i>see</i> statement page 75 .....			296,872	90
Agreeing with total amount paid on Construction, as per statement, page 84 .....			301,968,777	99

W. C. LITTLE,

*Accountant.*DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

## RECAPITULATION—GOVERNMENT RAILWAYS.

	Year.	Construction.	Working expenses.	Revenue.
		\$ cts.	\$ cts.	\$ cts.
Government expenditure prior to Confederation		13,881,460 65		
" " since	1868	483,353 65	359,961 08	420,752 58
" " "	1869	282,615 18	387,548 47	455,022 76
" " "	1870	1,729,381 49	445,208 75	471,245 09
" " "	1871	2,946,930 45	442,993 31	565,713 52
" " "	1872	5,620,569 67	595,076 22	622,900 56
" " "	1873	5,763,268 81	1,011,892 60	703,458 26
" " "	1874	3,925,123 69	1,847,925 24	893,430 17
" " "	1875	5,018,427 85	1,581,934 24	886,087 42
" " "	1876	4,497,434 75	1,497,128 22	966,922 42
" " "	1877	3,209,502 16	1,890,268 80	1,285,110 27
" " "	1878	2,643,741 73	2,032,873 05	1,514,846 38
" " "	1879	2,507,053 71	2,233,496 34	1,419,955 60
" " "	1880	6,109,077 14	1,851,489 26	1,739,137 25
" " "	1881	5,577,236 73	2,220,421 39	2,200,486 25
" " "	1882	5,175,046 61	2,310,638 54	2,237,583 39
" " "	1883	11,707,619 02	2,636,551 70	2,541,205 41
" " "	1884	14,013,074 89	2,613,508 87	2,551,937 97
" " "	1885	11,224,244 54	2,749,710 53	2,624,243 07
" " "	1886	4,443,220 17	2,819,973 50	2,628,336 35
" " "	1887	1,846,887 18	3,152,650 40	2,840,747 88
" " "	1888	1,765,582 11	3,621,076 62	3,166,253 22
" " "	1889	2,700,857 37	3,513,063 67	3,167,542 67
" " "	1890	2,392,767 99	3,846,044 42	3,203,874 11
" " "	1891	1,184,317 34	3,949,263 73	3,181,888 56
" " "	1892	417,425 73	3,748,597 77	3,136,393 51
" " "	1893	712,917 44	3,288,629 62	3,262,505 62
" " "	1894	585,749 01	3,226,208 13	3,179,019 57
" " "	1895	376,814 83	3,197,846 17	3,129,450 37
" " "	1896	324,774 72	3,254,442 64	3,140,678 47
" " "	1897	204,624 31	3,195,959 58	3,060,074 38
" " "	1898	270,990 85	3,507,248 88	3,313,847 10
" " "	1899	1,112,348 47	3,696,612 31	3,940,570 11
" " "	1900	3,309,130 42	4,665,228 06	4,774,161 87
" " "	1901	3,922,989 37	5,739,051 54	5,213,381 24
" " "	1902	5,386,611 24	5,861,099 54	5,918,990 43
" " "	1903	3,083,680 86	6,474,134 20	6,584,598 77
" " "	1904	2,619,059 86	7,599,958 57	6,627,255 51
" " "	1905	6,125,481 79	8,906,154 35	7,050,892 11
" " "	1906	6,002,565 74	7,893,653 49	7,950,552 97
" " "	1907	7,174,370 17	6,328,745 65	6,509,186 49
" " "	1908	23,684,005 25	9,595,295 43	9,534,569 04
" " "	1909	29,414,227 34	9,764,586 51	8,894,4 0 42
" " "	1910	21,505,975 91	9,095,903 96	9,647,963 71
" " "	*1911	24,532,466 18	10,037,878 77	10,249,394 38
" " "	*1912	23,108,805 52	11,074,852 80	11,034,165 83
" " "	1913	17,375,968 10	12,499,925 65	12,442,203 46
Total		302,008,777 99	192,262,712 57	180,882,956 52

Total amount paid on construction.....\$302,008,777 99

Less amount received from the City of St. John, N.B., as purchase price of the  
Carleton Branch Railway .....40,000 00

Cost of construction.....†\$301,968,777 99

\* Amount paid for Quebec Bridge deducted this year to form a separate statement by itself.

† Agreeing with amount expended on Capital Account on Railways, etc., see page 83.

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

## STATEMENT showing Miscellaneous Expenditure of the Department of Railways and Canals yearly.

Year ending.	Chargeable to Capital.	Chargeable to Income.			Chargeable to Revenue.			Total Yearly expenditure.
	Canals.	Canals.	Railways.	General.	Canals.	Railways.	General.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1868.				6,305 66	12,000 00		2,416 66	20,722 32
1869.				8,367 52	12,000 00		1,000 00	21,367 52
1870.				7,853 03	18,698 89		7,679 78	34,231 70
1871.				34,773 72	12,018 98			46,792 70
1872.				20,049 50	12,208 76			32,258 26
1873.				36,891 74	12,099 44		6,889 20	55,880 38
1874.				40,098 84	12,959 25		5,428 98	58,487 07
1875.				35,579 24	12,047 43		5,620 17	53,246 84
1876.				42,920 10	86 08		5,690 28	48,696 46
1877.					51 87	43,639 97		43,691 84
1878.		1,860 00			556 00		34,388 59	36,804 59
1879.								
1880.		2,561 55			323 16			2,884 71
1881.		2,338 41			5,535 22			7,873 63
1882.					9,826 23			9,826 23
1883.		11,781 27			6,978 54			18,759 81
1884.		7,486 62	62,256 58		8,305 41			78,048 61
1885.		16,725 47	11,003 38		1,210 61			28,939 46
1886.		20,323 62	10,383 59		776 30			31,483 51
1887.		23,512 00	23,545 34		649 04			47,706 38
1888.		34,533 07	22,898 90		5,799 83			63,231 80
1889.		10,091 87	16,552 64		5,207 64			31,852 15
1890.		16,426 69	50,909 74		49,550 21			116,886 64
1891.		16,925 31	16,314 41		56,922 05			90,161 77
1892.		6,540 49	19,062 51		65,074 07			90,677 07
1893.		8,498 41	4,313 73	28,640 93	63,965 54			105,418 61
1894.		2,883 11	4,855 11	15,746 31	60,265 22			83,749 75
1895.		4,132 28	13,221 27	19,304 87	60,769 56			97,427 98
1896.		10,893 40	6,562 20	25,194 21	70,340 22			112,990 03
1897.		2,937 47	5,118 99	25,142 90	62,777 12		597 39	96,573 87
1898.		1,719 69	8,327 96	28,042 10	56,284 42	1,400 00		95,774 17
1899.		1,318 79	67,005 86	22,085 19	66,850 29			157,260 13
1900.		11,873 35	33,496 99	22,802 18	58,836 57			127,009 09
1901.		12,267 99	28,658 78	33,986 68	61,938 61			136,852 06
1902.		3,658 23	21,752 58	34,138 50	65,770 65			125,319 96
1903.		2,491 84	15,570 43	35,398 00	63,175 19			116,635 46
1904.		3,730 79	85,353 17	36,262 32	66,067 30			191,413 58
1905.		1,498 14	97,507 00	38,660 52	64,515 07			202,180 73
1906.		9,160 44	99,018 80	37,484 64	62,171 45			267,835 33
1907.		9,687 55	92,115 62	34,183 75	66,251 27			202,288 19
1908.	14,999 70	24,760 08	178,266 39	45,115 99	105,518 99			368,661 15
1909.	5,034 00	28,819 54	181,615 90	20,912 04	106,065 87			342,447 35
1910.		29,421 06	200,329 52	4,706 79	111,755 68			346,213 05
1911.		54,734 48	218,178 85	2,369 52	103,398 27	1,000 00		379,681 12
1912.	5,999 20	57,151 70	257,670 45	2,922 06	110,049 21	3,950 00		437,742 62
1913.	3,809 24	39,026 95	360,812 49	9,338 17	121,370 46	4,500 00		538,857 31
	29,842 14	491,771 66	2,212,679 18	755,277 02	1,929,021 97	54,489 97	69,711 05	5,542,792 92

N.B.—The expenditure of Quebec Bridge included in Miscellaneous Expenditure (income railways) in 1909 and 1910 has been deducted from each of these years to form a separate account under the heading of "QUEBEC BRIDGE."

W. C. LITTLE,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing the TOTAL EXPENDITURE and REVENUE of the Department of Railways and Canals prior to and since Confederation to March 31, 1913.

TOTAL EXPENDITURE .....	\$687,219,980 78
Expenditure on Railways .....	\$496,778,659 71
" Quebec Bridge .....	2,778,337 57
" Railway Subsidies .....	*48,529,915 92
" Canals .....	138,308,079 51
" General .....	824,988 07
Total expenditure .....	\$687,219,980 78

## Classification of EXPENDITURE IN GENERAL—

Capital Account .....	\$408,167,706 94
Revenue " .....	218,764,978 63
Income " .....	11,757,379 29
Consolidated Fund—Railway Subsidies.....	48,529,915 92

Total expenditure ..... \$687,219,980 78

## Classification of EXPENDITURE IN DETAIL—

Railways—		
Capital—See page 83 .....	\$301,671,905 09	
Income—See pages 75, 76 and 85 .....	2,789,552 08	
Revenue—See pages 84 and 85 .....	192,317,202 54	\$496,778,659 71
Quebec Bridge—		
Capital—See page 81 .....	\$ 2,343,682 43	
Income—See page 81 .....	434,655 14	2,778,337 57
Railway Subsidies—See pages 90 to .....	\$48,529,915 92	48,529,915 92
Canals—		
Capital—See pages 61 and 85 .....	\$104,152,119 42	
Income—See pages 61 and 85 .....	7,777,895 05	
Revenue—See pages 61 and 85 .....	26,378,065 04	138,308,079 51
General Expenditure—		
Income—See page 85 .....	\$755,277 02	
Revenue—See page 85 .....	69,711 05	824,988 07
Total expenditure .....	\$687,219,980 78	

\* This amount does not include the subsidy of \$25,000,000 to the Canadian Pacific Railway, nor the amount \$660,683.08 expended on the Annapolis and Digby Railway, both of which are included in Capital Account, nor the annual payment of \$219,700 to the Provincial Government of Quebec, being interest at the rate of 5 per cent on the sum of \$2,394,000 up to 1905, granted by 47 Vict., cap. 8 (1884) and the annual payment of \$107,790, being interest at the rate of 4½ per cent since and including 1905 on the said sum of \$2,394,000 for the line between Ottawa and Quebec which sum was transferred to the Public Debt as a liability and is dealt with by the Finance Department, See Public Accounts, 1898-1913 and page 79, 1908.

## SESSIONAL PAPER No. 20

## Classification of Expenditure into Capital and Consolidated Fund—

Railways—		
Capital—Including Quebec Bridge .....	\$304,015,587 52	
Consolidated Fund (Income and Revenue)—		
Railway Subsidies, etc.....	244,071,325 68	
		\$548,086,913 20
Canals—		
Capital .....	\$104,152,119 42	
Consolidated Fund (Income and Revenue)....	34,155,960 09	
		138,308,079 51
General Expenditure—		
Consolidated Fund (Income and Revenue)....		824,988 07
Total expenditure .....		<u>\$687,219,980 78</u>

## Total REVENUE RECEIVED from July 1, 1867 to Mar. 31, 1913—

Railways—See page 84 .....	\$180,882,956 52	
Canals—See page 61 .....	14,949,174 77	
Total Revenue .....		<u>\$195,832,131 29</u>

W. C. LITTLE,  
*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

## STATEMENT

Showing Subsidies voted for Railways as to which contracts have been entered into and payments made from July 1, 1883, to March 31, 1913.

## SESSIONAL PAPER No. 20

STATEMENT showing the Railway Subsidies paid during the year ending March 31, 1913

Name of Railway.	Amount.
1. Algoma Central & Hudson Bay Railway Company, Ont.— Sault Ste. Marie to point on Canadian Pacific Railway.. From point on Canadian Pacific Railway to the National Transcontinental Railway .....	\$ 85,819 06 309,040 38
2. Algoma Eastern Railway Co. (formerly the Manitoulin and North Shore Railway Co.)— Little Current to Sudbury, Ont.....	254,089 40
3. Atlantic, Quebec & Western Ry. Co.— Paspébiac to Gaspé, Que.....	414,618 00
4. Canadian Northern Pacific Railway Co.— Yellowhead Pass to Vancouver and mouth of Fraser River, B.C.....	2,705,378 00
5. Canadian Pacific Railway Co.— Winnipeg to Gimli, Man..... Teulon to Icelandic River, Man.....	4,346 43 81,200 00
6. Esquimalt & Nanaimo Railway Co.— Wellington to Alberni, B.C.....	365,440 00
7. Fredericton & Grand Lake Railway Co., N.B.— Point near Gibson to Point near Minto on the Inter- colonial Railway .....	104,996 04
8. Ha-Ha Bay Railway Co.— From point near St. Mathias to Ha-Ha Bay, Que. From Labrosse Junction to the Saguenay River. From La Terrière Junction to Lake Kenogami. From point near Bagotville to St. Alexis .....	148,148 20
9. Kettle River Valley Railway Co., B.C.— Midway to Merritt .....	107,138 40
10. Northern New Brunswick & Seaboard Railway Co., N.B.— Drummond to point on Intercolonial Railway.....	86,528 00
11. Orford Mountain Railway Co.— Mansonville to International boundary, Quebec.....	9,984 00
12. Quebec Central Railway Co.— Extension Ste. Justine to St. Sabine, Que.....	8,576 00
13. Quebec & Saguenay Railway Co., Quebec— St. Joachim, northwesterly .....	27,641 60
14. Southampton Railway Co.— Millville to St. John, N.B.....	48,442 88
15. St. John & Quebec Railway Co.— St. John to Grand Falls, N.B.....	174,120 96
Total .....	\$4,935,507 35

W. C. LITTLE,  
*Accountant.*

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

4 GEORGE V., A. 1914

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883, to June 30, 1906	
Authority.	Amount.			\$	cts.
	\$ cts.			\$	cts.
46 Vic., chap. 25	156,800 00	1	International Railway, Quebec.....	156,800	00
53 " 2					
45 " 14	384,000 00				
46 " 25	80,000 00				
48-49 " 59	96,000 00				
49 " 10	186,250 00				
50-1 " 24	28,800 00	2	Quebec and Lake St. John Railway, Quebec.....	1,092,759	50
51 " 3	96,000 00				
52 " 3	64,000 00				
53 " 2	30,000 00				
54-5 " 8	5,250 00				
57-8 " 4	44,800 00				
46 " 24	89,600 00				
49 " 10	70,000 00	3	Kingston, Napanee and Western Railway, formerly		
50-1 " 24	12,800 00		Napanee, Tamworth and Quebec Ry., Ontario...	208,732	80
52 " 3	32,000 00				
55-6 " 5	64,000 00				
47 " 8	272,000 00				
51 " 3	41,000 00	4	Pontiac Pacific Junction Railway, Quebec.....	193,578	00
53 " 2	24,000 00				
46 " 25	115,200 00				
47 " 8	76,800 00	5	Caraquette Railway, N.B.....	224,000	00
50-1 " 24	32,000 00				
47 " 8	32,000 00				
49 " 10	57,600 00				
52 " 3	22,400 00	6	Canadian Northern Quebec Ry. Co., formerly Great		
53 " 2	48,000 00		Northern Ry., Quebec.....	557,788	31
56 " 2	48,000 00				
57-8 " 4	70,400 00				
7-8 Ed. VII 63	*				
47 " 8	48,000 00	7	Kingston and Pembroke Railway, Ontario.....	48,000	00
45 " 14					
46 " 26	660,000 00	8	Northern and Pacific Junction Railway, Ontario..	1,320,000	00
53 " 2	660,000 00				
47 " 8	128,000 00				
48-9 " 59	19,200 00				
49 " 10	32,000 00	9	Canada Eastern Ry., formerly Northern and West-		
48-9 " 59	24,439 84		ern Ry., N.B., including also Chatham Branch Ry.	374,839	84
51 " 3	140,800 00				
57-8 " 4	35,200 00				
62-3 " 7	*				
47 " 8					
51 " 3	60,342 00	10	Quebec Central Railway, Quebec.....	348,342	00
7-8 " 63					
53 " 2	288,000 00				
48-9 " 59	72,000 00	11	Montreal and Sorel Railway, Quebec.....	93,757	57
53 " 2	40,000 00				
48-9 " 59	30,000 00				
50-1 " 24	64,000 00	12	Montreal and Champlain Junction Railway, Quebec.	103,600	00
51 " 3	9,600 00				
46 " 25	38,400 00	13	Elgin, Petiotcodiac and Havelock Railway, N.B....	82,652	82
51 " 3	44,252 82				
47 " 8	22,400 00	14	St. Louis and Richibucto Railway, N.B.....	22,400	00
48-9 " 59	96,000 00				
49 " 10	38,400 00	15	Canada Atlantic Railway, Ontario.....	282,355	20
50-1 " 24	180,000 00				
47 " 6	750,000 00	16	Esquimalt and Nanaimo Railway, B.C.....	750,000	00
47 " 8	96,000 00	17	Erie and Huron Railway, Ontario.....	96,000	00
46 " 25	320,000 00				
47 " 8	300,000 00	18	Baie des Chaleurs Railway, Quebec.....	620,000	00
52 " 3					
Carried forward.....				6,575,606	04

## SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1913.

Payments.							Total March 31, 1913.	Number.
1906-1907.	1907-1908.	1908-1909.	1909-1910.	1910-1911.	1911-1912.	1912-1913		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
							156,800 00	1
67,712 00	73,472 00				27,520 00		1,261,463 50	2
							208,732 80	3
							193,578 00	4
							224,000 00	5
	256,870 40	55,449 60	164,172 29	144,608 51	86,468 03		1,265,357 14	6
							48,000 00	7
							1,320,000 00	8
							374,839 84	9
	55,638 69			129,320 61		8,576 00	541,877 10	10
							93,757 57	11
							103,600 00	12
							82,652 82	13
							22,400 00	14
							282,355 20	15
						365,440 00	1,115,440 00	16
							96,000 00	17
							620,000 00	18
67,712 00	385,981 00	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	8,010,854 17	

4 GEORGE V., A. 1914

STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883 to June 30, 1906.	
Authority.	Amount.			\$	cts.
	\$ cts.			\$	cts.
			Brought forward. ....	6,575,606	04
48-9 Vic., c. 59	118,400 00	1	New Brunswick and Prince Edward Island Ry. ....	113,440	00
50-1 " 24	217,600 00	2	Laurentian Railway, formerly St. Lawrence, Lower Laurentian and Saguenay Railway, Quebec. ....	217,000	00
49 " 10	11,200 00	3	L'Assomption Railway, Quebec. ....	11,200	00
49 " 10	32,000 00	4	} Great Eastern Railway, Quebec. ....	40,345	00
50-1 " 24	96,000 00				
56 " 2	64,000 00	5	} Irondale, Bancroft and Ottawa Railway, Ontario. . .	144,000	00
53 " 2	37,500 00				
47 " 8	160,000 00	6	} Buctouche and Moncton Railway, N.B. ....	101,600	00
52 " 3					
49 " 10	96,000 00	7	} Albert Southern Railway, N.B. ....	50,460	00
50-1 " 24	6,400 00				
47 " 8	51,200 00	8	} Lake Temiscamingue Colonization Railway, Quebec.	310,335	95
52 " 3					
50-1 " 24	65,200 00	9	} Joggins Railway, N.S. ....	37,500	00
57-8 " 4	274,940 00				
49 " 10	38,400 00	10	} Temiscouata Railway, N.B., and Quebec. ....	645,950	00
50-1 " 24	4,000 00				
45 " 14	240,000 00	11	} Leamington and St. Clair Railway, Ontario. ....	51,200	00
48-9 " 58	258,000 00				
51 " 3	100,000 00	12	} Toronto, Grey and Bruce Railway, Ontario. ....	14,656	00
53 " 2	51,200 00				
48-9 " 50	44,800 00	13	} Dominion Lime Co., Quebec. ....	15,360	00
50 1 " 24	6,400 00				
59 " 10	16,000 00	14	} West Ontario Pacific Railway and Ontario and Quebec Railway. ....	256,000	00
50-1 " 24	22,400 00				
49 " 10	256,000 00	15	} Drummond County Railway, Quebec. ....	423,936	00
53 " 2	96,000 00				
52 " 3	14,400 00	16	} Brockville, Westport and Sault Ste. Marie, Railway, Ontario. ....	105,200	00
53 " 2	76,800 00				
57-8 " 4	96,000 00	17	} Montreal and Lake Maskinonge Railway, Quebec. . .	41,280	00
48-9 " 59	128,000 00				
53 " 2	64,000 00	18	} South Norfolk Railway, Ontario. ....	54,400	00
54-5 " 8	32,000 00				
57-8 " 4	10,200 00	19	} Guelph Junction Railway, Ontario. ....	46,000	00
49 " 10	54,400 00				
50-1 " 24	51,200 00	20	} Belleville and North Hastings Railway, Ontario. ....	21,888	00
48-9 " 54	22,400 00				
49 " 19	108,800 00	21	} Hereford Railway, Quebec. ....	155,200	00
52 " 0	48,000 00				
50-1 " 23	118,400 00	22	} Lake Erie and Detroit River Railway, Ontario. ....	475,851	00
55-6 " 4	224,000 00				
62-3 " 5	62,400 00	23	} Beauharnois Junction Railway, Quebec. ....	62,400	00
50-1 " 27	138,400 00				
56 " 4	108,000 00	24	} St. Catharines and Niagara Central Ry., Ontario. . .	38,400	00
50-1 " 24	108,800 00				
55-6 " 5	30,000 00	25	} Fredericton and St. Mary's Ry. Bridge Co., N.B. . . .	30,000	00
57-8 " 4	9,600 00				
52 " 3	240,000 00	26	} Harvey Branch Railway Co., N.B. ....	5,553	57
50-1 " 24	44,800 00				
55-6 " 5	19,200 00	27	} Nova Scotia Central Railway Co., N.S. . . . .	235,200	00
61 " 1	54,400 00				
50-1 " 24	44,800 00	28	} Cumberland Railway and Coal Co., N.S. ....	39,850	00
52 " 3	19,200 00				
52 " 3	54,400 00	29	} Pontiac and Renfrew Railway, Ontario. ....	13,600	00
63 4 " 8	29,840 00				
		30	Thousand Islands Railway, Ontario. ....	29,840	00
			Carried forward. ....	10,363,851	56

## SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1913.

Payments.							Total March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	\$ cts.	
67,712 00	385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	8,010,854 17	
.....	.....	.....	.....	.....	.....	.....	113,440 00	1
.....	.....	.....	.....	.....	.....	.....	217,600 00	2
.....	.....	.....	.....	.....	.....	.....	11,200 00	3
.....	.....	.....	.....	.....	.....	.....	40,345 00	4
.....	.....	.....	.....	.....	.....	.....	144,000 00	5
.....	.....	.....	.....	.....	.....	.....	101,600 00	6
.....	.....	.....	.....	.....	.....	.....	50,460 00	7
.....	.....	.....	.....	.....	.....	.....	310,335 95	8
.....	.....	.....	.....	.....	.....	.....	37,500 00	9
.....	.....	.....	.....	.....	.....	.....	645,950 00	10
.....	.....	.....	.....	.....	.....	.....	51,200 00	11
.....	.....	.....	.....	.....	.....	.....	14,656 00	12
.....	.....	.....	.....	.....	.....	.....	15,360 00	13
.....	.....	.....	.....	.....	.....	.....	256,000 00	14
.....	.....	.....	.....	.....	.....	.....	423,936 00	15
35,600 00	.....	.....	.....	.....	.....	.....	140,800 00	16
.....	.....	.....	.....	.....	.....	.....	41,280 00	17
.....	.....	.....	.....	.....	.....	.....	54,400 00	18
.....	.....	.....	.....	.....	.....	.....	46,000 00	19
.....	.....	.....	.....	.....	.....	.....	21,888 00	20
.....	.....	.....	.....	.....	.....	.....	155,200 00	21
.....	.....	.....	.....	.....	.....	.....	475,851 00	22
.....	.....	.....	.....	.....	.....	.....	62,400 00	23
.....	.....	.....	.....	.....	.....	.....	38,400 00	24
.....	.....	.....	.....	.....	.....	.....	30,000 00	25
.....	.....	.....	.....	.....	.....	.....	5,553 57	26
.....	.....	.....	.....	.....	.....	.....	235,200 00	27
.....	.....	.....	.....	.....	.....	.....	39,850 00	28
.....	.....	.....	.....	.....	.....	.....	13,600 00	29
.....	.....	.....	.....	.....	.....	.....	29,840 00	30
103,312 00	385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	11,834,699 69	

4 GEORGE V., A. 1914

STATEMENT showing subsidies voted for Railways as to which contracts

SUBSIDIES VOTED.		Number.	Railways.	July 1, 1883, to June 30, 1906.	
Authority.	Amount.			\$	cts.
	\$ cts.			\$	cts.
			Brought forward . . . . .	10,363,851	56
52 Vic., chap. 3	96,000 00	1	Quebec, Montmorency and Charlevoix Ry. Co., Que.	96,000	00
56 " 3					
52 " 3	375,000 00	2	St. Clair Frontier Tunnel Co., Ontario . . . . .	375,000	00
50-1 " 24	57,600 00	3	Brantford, Waterloo and Lake Erie Ry., Ontario...	57,600	00
57-8 " 4					
51 " 3	287,200 00	4	Port Arthur, Duluth and Western Ry., Ontario.....	271,200	00
53 " 2					
50-1 " 24					
53 " 2	192,000 00	5	Montreal and Ottawa Railway, Ontario . . . . .	192,000	00
54-5 " 8					
57-8 " 4					
50-1 " 24	44,800 00	6	Cornwallis Valley Railway, N.S . . . . .	44,800	00
52 " 3	320,000 00				
52 " 3	64,000 00	7	Ottawa, Northern and Western Ry., Quebec,		
57-8 " 6	* 64,000 00		formerly Ottawa and Gatineau Valley Railway.	410,588	00
60-1 " 4					
47 " 8					
51 " 3	83,612 00				
52 " 3	142,400 00	8	Central Railway, N.B. . . . .	226,012	54
53 " 2	48,000 00				
57-8 " 4					
61 " 1					
62-3 " 1					
53 " 2	361,270 00	9	Montreal and Western Railway, Quebec . . . . .	361,270	00
52 " 3	128,000 00	10	Parry Sound and Colonization Railway, Ontario . . .	152,800	00
57-8 " 4	64,000 00				
52 " 3	163,200 00	11	Shuswap and Okanagan Railway, B.C.....	163,200	00
54-5 " 8	89,600 00				
53 " 2	35,200 00	12	Tobique Valley Railway, N.B.....	134,016	00
55-6 " 5	9,600 00				
53 " 2	112,000 00	13	Columbia and Kootenay, B.C.....	88,800	00
53 " 2	35,200 00	14	Waterloo Junction Railway, Ontario.....	32,800	00
53 " 2	99,200 00	15	Orford Mountain Railway Co., Quebec....	168,814	50
53 " 2	57,600 00	16	St. Lawrence and Adirondack Railway, Quebec. . .	149,814	60
55-6 " 5	25,024 00				
55-6 " 5	*40,000 00	17	New Glasgow Iron, Coal and Railway Co., N.S. . . .	39,840	00
56 " 2	102,400 00	18	United Counties Railway Co., Quebec. . . . .	188,816	00
57-8 " 4	102,400 00				
55-6 " 5	*21,600 00	19	Philipsburg Junction Ry. Quarry Company, Quebec.	23,712	00
55-6 " 5	*430,400 00	20	Ottawa, Arnprior and Parry Sound Ry., Ontario....	779,712	00
56 " 2	67,200 00				
57-8 " 4	38,400 00	21	Montford Colonization, Railway, Quebec.. . . .	167,440	00
60-1 " 4	66,000 00				
55-6 " 5	48,000 00	22	Lotbinière and Megantic Railway, Quebec. . . . .	96,000	00
57-8 " 4	48,000 00				
56 " 2	48,000 00	23	Grand Trunk, Georgian Bay and Lake Erie Ry., Ont.	39,744	00
55-6 " 5	80,000 00	24	Canadian Pac. Ry., B.C., Revelstoke to Arrow Lake..	80,000	00
57-8 " 4	121,600 00	25	Nakusp and Slocan Railway, B.C.....	117,760	00
55-6 " 5	89,600 00	26	Dominion Coal Company, N.S. . . . .	87,808	00
56 " 2	22,400 00	27	Oshawa Railway and Navigation Company, Ontario.	22,400	00
57-8 " 4	*51,200 00	28	Tilsonburg, Lake Erie and Pacific Ry., Ontario....	117,431	48
56 " 2	*11,200 00	29	St. Stephen and Milltown Ry., N.B.....	14,848	00
57-8 " 4	*88,400 00	30	Gulf Shore Railway Company, N.B.....	53,699	20
57-8 " 4	9,000 00	31	Cap de la Magdeleine Railway, Quebec.....	7,424	00
56 " 2	32,000 00	32	Ontario, Belmont and Northern Ry. Company, Ont..	30,720	00
*	*	33	Coast line of N.S., now Halifax and Yarmouth Ry..	160,000	00
*	*	34	Ottawa and New York Railway Company, Ontario..	262,384	00
			Carried forward. . . . .	15,578,072	80

## SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1913.

Payments.							Total March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
103,312 00	385,981 09	55,449 60	164,172 29	273,929 12	113,988 03	374,016 00	11,834,699 69	
							96,000 00	1
							375,000 00	2
							57,000 00	3
							271,200 00	4
							192,000 00	5
							44,800 00	6
	4,243 20						414,931 20	7
							226,012 54	8
							361,270 00	9
							152,800 00	10
							163,200 00	11
							134,016 00	12
							88,800 00	13
							32,800 00	14
	24,128 00					9,984 00	202,926 50	15
							149,481 60	16
							39,840 00	17
							188,816 00	18
							23,712 00	19
							779,712 00	20
							167,440 00	21
							96,000 00	22
							39,744 00	23
							80,000 00	24
							117,760 00	25
							87,808 00	26
							22,400 00	27
							117,431 48	28
							14,848 00	29
							53,699 20	30
							7,424 00	31
							20,720 00	32
							160,000 00	33
							262,384 00	34
103,312 00	414,352 29	55,449 60	164,172 29	273,929 12	113,988 03	384,000 00	17,087,276 21	

4 GEORGE V., A. 1914

## STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883, to June 30, 1906.	
Authority.	Amount.			\$	cts.
	\$ cts.			\$	cts.
			Brought forward.....	15,578,072	80
60-61 Vic., c. 5	3,630,000 00	1	Canadian Pacific Ry. Co., B. C. (Crow's Nest Pass)...	3,404,720	00
60-61 " 4	500,000 00	2	Grand Trunk Ry. Co. 'Victoria Jubilee Bridge,' Que.	500,000	00
63 " 3		3	International Ry. of New Brunswick, formerly Restigouche and Western Ry. Co	127,208	07
67-8 Ed. VII, 63		4	East Richelieu Railway Co., Quebec	69,952	00
" "	"	5	South Shore Ry. (Quebec, Montreal and Southern)...	203,240	81
7-8 Ed. VII, 63	"	6	Pembroke Southern Railway, Ontario...	64,000	00
" "	"	7	Massawippi Valley Railway Co., Quebec.....	5,376	00
" "	"	8	Inverness and Richmond Co. Ry. N.S., now Inverness Ry. and Coal Co.	368,545	97
" "	"	9	Canadian Northern Railway Co., Ontario, Manitoba and N.W.T.....	1,909,132	00
" "	"	10	Canadian Pacific Railway Co. (Pipestone Branch)...	160,000	00
6-7 Ed. VII, 40	"	11	Central Ontario Railway Co., Ontario.....	67,200	00
" "	"	12	Midland Railway Co., N.S.....	362,200	00
62-3 Vic., c. 7	1,000,000 00	13	Quebec Bridge Co., Quebec.....	374,353	33
63-4 " 8		14	St. Mary River Railway Co., N.W.T.....	148,094	00
60-1 Vic., c. 4	212,500 00	15	(Pontiac and Pacific and Ottawa and Gatineau Ry. Co. (Interprovincial Bridge over Ottawa River)...	212,500	00
63-4 " 2		16	Atlantic and Lake Superior Ry., Quebec.....	146,490	84
1 Ed. VII, c. 7	"	17	Montreal and Province Line Railway, Quebec.....	58,560	00
62-3 Vic., c. 7	"	18	York and Carleton Railway, N.B.....	18,336	00
62-3 " 7	"	19	Algoma Central and Hudson Bay Railway, Ontario...	924,976	00
63-4 " 8	"				
1 Ed. VII, c. 7	"	20	Cape Breton Extension Railway, N.S.....	182,400	00
" "	"	21	Can. Pac. Ry. Co. (Kootenay and Arrowhead Branch)	153,866	00
" "	"	22	(Selkirk Branch).....	83,200	00
" "	"	23	(Dyment Branch).....	22,336	00
" "	"	24	(Waskada Branch).....	64,000	00
9-10 Ed. VII, 51	"	25	Manitoulin and North Shore Ry. Co., Ontario, now Algoma Eastern Railway Co. (1913).....	32,000	00
" "	"	26	Bay of Quinté Railway Ont.....	69,120	00
" "	"	27	Bruce Mines and Algoma Railway, Ont.....	53,920	00
" "	"	28	Maganetawan River Railway Co., Ont.....	3,552	00
" "	"	29	Canadian Northern Quebec Ry., formerly Chateauguay and Northern Ry., Quebec.....	307,595	00
" "	"	30	Canadian Pacific Ry. Co. (Pheasant Hill Branch)...	425,200	00
" "	"	31	Halifax and Southwestern Railway Co., N.S.....	653,776	00
" "	"	32	Northern Colonization Railway Co., Quebec.....	133,760	00
" "	"	33	New Brunswick Coal and Railway Co., N.B.....	48,000	00
" "	"	34	Schomberg and Aurora Railway Co., Ont.....	46,144	00
" "	"	35	Lindsay, Bobcaygeon and Pontypool Ry. Co., Ont...	185,173	06
" "	"	36	Middleton and Victoria Beach Ry. Co., N.S.....	98,092	00
" "	"	37	Beersville Coal and Ry. Co., N.B., now North Shore Ry	20,736	00
Ed. VII, c. 57	"	38	Nicola, Kamloops and Similkameen Coal and Ry. Co.	110,592	00
4 " 34	"	39	Canadian Pacific Ry. (Staynerville Branch).....		
6 " 43	"	40	Klondike Mines Railway.....		
6 " 43	"	41	Kettle River Valley Ry. Co., B.C.....		
6 " 43	"	42	Colchester Coal and Ry. Co., N.S.....		
3 " 57	"	43	Minudie Coal Co., N.S.....		
6 " 43	"	44	Atlantic, Quebec and Western Ry. Co., Quebec.....		
9-10 " 51	"				
6 " 43	"	45	Napierville Junction Ry. Co., Quebec.....		
6-7 " 40	"	46	Edmonton, Yukon and Pac. Ry. Co., Alberta.....		
9-7 " 40	"	47	Canadian Northern Ontario Ry. Co., formerly James Bay Ry. Co	651,264	00
7-8 " 63	"				
			Carried forward.....	28,057,685	06

† Of this amount, \$16,164.43 were in connection with subsidy to Montreal and Sorel Railway.

‡ Reimbursement of amounts for claims still unpaid and others in duplicate.

## SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1913.—Continued.

Payments.							Total, March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
103,312 00	414,352 29	55,448 60	164,172 29	273,929 12	113,988 03	384,000 00	17,087,276 21	
							3,404,720 00	1
							500,000 00	2
51,200 00		189,849 60	187,494 40	169,536 00			725,288 07	3
		43,414 55	184,320 00	60,000 00	23,835 70		69,952 00	4
							1514,811 06	5
							64,000 00	6
							5,376 00	7
							368,545 97	8
							1,909,132 00	9
							160,000 00	10
	76,861 36	35,404 64		24,601 32	826 17		204,893 49	11
4,967 70	31,892 40						399,060 40	12
							374,353 33	13
							148,094 00	14
							212,500 00	15
\$1,521 82							144,969 02	16
	14,560 00						58,560 00	17
							32,896 00	18
					133,584 00	394,859 44	1,453,419 44	19
			14,400 00				196,800 00	20
							153,866 00	21
							83,200 00	22
							22,336 00	23
							64,000 00	24
				68,638 72		254,089 40	354,728 12	25
72,602 45							141,722 45	26
							53,920 00	27
							3,552 00	28
84,224 75							391,819 75	29
							435,200 00	30
268,107 20	316,567 73						1,238,450 93	31
		68,320 00	153,120 00				355,200 00	32
							48,000 00	33
							46,144 00	34
							185,173 06	35
27,667 20							125,760 00	36
							20,736 00	37
	190,208 00						300,800 00	38
9,700 00	3,424 00						13,024 00	39
96,000 00	101,184 00						197,184 00	40
	97,771 52				148,800 00	107,138 40	353,709 92	41
	12,800 00						12,800 00	42
	18,544 00						18,544 00	43
	64,000 00	92,672 00	208,896 00	31,334 40	91,279 60	414,618 00	902,800 00	44
	173,440 00						173,440 00	45
	91,200 00						91,200 00	46
420,608 00	244,224 00	556,864 00	250,982 40	116,889 60			2,240,832 00	47
1,136,767 48	1,851,029 30	1,041,974 39	1,163,385 09	744,929 16	512,313 50	1,554,705 24	36,062,789 22	

a Amount actually paid after deductions amounting to \$1,521.82 made in 1905-06 (being for refunds, &c.,) from the total of \$146,490.84, previously reported, for which cheques had issued.

4 GEORGE V., A. 1914

## STATEMENT showing subsidies voted for Railways as to which contracts

Subsidies Voted.		Number.	Railways.	July 1, 1883 to June 30, 1906.	
Authority.	Amount.			\$	cts.
	\$ cts.		Brought forward .....	28,057,685	06
7-8 Ed. VII. c. 63	*	1	Maritime Coal and Railway Co. ....		
7-8 " 63	*	2	St. Marys and Western Ontario Ry. Co. ....		
7-8 " 63	*	3	North Shore Ry. Co., formerly Beersville Coal and Ry. Co. ....		
7-8 " 63	*	4	St. Maurice Valley Ry. Co.—Three Rivers to St. Maurice. ....		
7-8 " 63	*	5	Grand Trunk Pacific Ry. Co. ....		
6 " 43	*	6	Canadian Pacific Ry. Co., Teulon to Icelandic River. ....		
7-8 " 63	*	7	Canadian Pacific Ry. Co., Moosejaw northwesterly ..		
7-8 " 63	*	8	Canadian and Gulf Terminal Ry. Co. ....		
6-7 " 40	*	9	Liverpool and Milltown Ry. 5 miles. ....		
7-8 " 63	*	10	Thessalon and Northern Ry. Co. ....		
7-8 " 34	*	11	Vancouver and Lulu Island Ry. Co. ....		
7-8 " 51	*	12	Quebec and Saguenay Ry. Co. ....		
7-8 " 63	*	13	Canadian Pacific Ry., Winnipeg to Gimli. ....		
		14	Ha Ha Bay Railway Co., Q. ....		
		15	Northern New Brunswick and Seaboard Railway Co., N.B. ....		
		16	Can. Northern Pacific Ry. Co., B.C. ....		
		17	Fredericton and Grand Lake Ry. Co., N.B. ....		
		18	Southampton Railway Co., N.B. ....		
		19	St. John and Quebec Railway Co., N.B. ....		
		Total .....		28,057,685	06
37 Vic., ch. 14	186,500 annually	20	Atlantic and Northwestern Railway .....	3,172,200	00
46 " 2	for 20 years. ...	21	Canada Central Railway .....	1,525,250	00
47 " 8		22	Canadian Pacific extension. ....	1,500,000	00
48-9 " 58	1,500,000 00		Total .....	34,255,135	06

\* 60-61 Victoria, Cap. 4, 62-63 Victoria, Cap. 7, 63-64 Victoria, Cap. 8, 1 Edward VII., Cap. 7, 40, and 7-8 Edward VII., Cap. 63, 8-9 Edward VII., Cap. 35, 9-10 Edward VII., Cap. 51 authorise a further sum of fifty per cent on so much of the average cost of the mileage subsidized as is in excess

DEPARTMENT OF RAILWAYS AND CANALS,  
OTTAWA, August 1, 1913.

## SESSIONAL PAPER No. 20

have been entered into and payments made up to March 31, 1913.—*Concluded.*

Payments.							Total March 31, 1913.	Number.
1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.		
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
1,136,767 48	1,851,029 30	1,041,974 39	1,163,385 09	744,929 16	512,313 50	1,554,705 24	36,062,789 22	
		3,200 00					3,200 00	1
		67,344 00			365 00		67,709 00	2
		6,880 00					6,880 00	3
		112,640 00		60,480 00			173,120 00	4
		367,249 00	550,551 96	302,679 04			1,220,480 00	5
			30,800 00			81,200 00	112,000 00	6
			303,360 00		78,432 00		381,792 00	7
				144,803 84	65,249 75		210,053 59	8
				32,000 00			32,000 00	9
					6,112 00		6,112 00	10
					61,760 00		61,760 00	11
					104,992 00	27,641 60	132,633 60	12
					30,176 00	4,346 43	34,522 43	13
						148,148 20	148,148 20	14
						86,528 00	86,528 00	15
						2,705,378 00	2,705,378 00	16
						104,996 04	104,996 04	17
						48,442 88	48,442 88	18
						174,120 96	174,120 96	19
1,136,767 48	1,851,029 30	1,599,287 39	2,048,097 05	1,284,892 04	859,400 25	4,935,507 35	41,772,663 92	
186,600 00	186,600 00	186,600 00					3,732,000 00	20
							1,525,250 00	21
							1,500,000 00	22
1,323,367 48	2,037,629 30	1,785,887 39	2,048,097 05	1,284,892 04	859,400 25	4,935,507 35	48,529,915 92	

3 Edward VII, Cap. 57, 4 Edward VII, Cap. 34, 6 Edward VII, Cap. 43, 6-7 Edward VII, Cap. \$3,200 per mile subsidy if the cost does not average more than \$15,000 per mile, it over that amount, of \$15,000, per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile.

W. C. LITTLE,

*Accountant.*



## PART II

### STATEMENTS

ON THE

## DEPARTMENTAL SOLICITOR

FOR THE YEAR 1912-13

SHOWING

- (1) Guarantee agreements.
- (2) Money subsidy agreements.
- (3) Contracts entered into during the year.
- (4) Leases, of water-powers and properties granted.
- (5) Property conveyed to the Crown and lands conveyed by the Crown.
- (6) Damages released.

4 GEORGE V., A. 1914

GUARANTEE AGREEMENTS for the construction of Railways entered into with the

No. of agree- ment.	Date of signature.	Railway Company.	Line of Railway.	Authority for execution.	
				Act of Parliament.	Order in Council.
19764	1912. Nov. 29...	The Canadian Nor- thern Alberta Ry. Company.	A line of railway extending from 2 a point on the line of railway of the Company 150 miles west of St. Albert and thence westerly to the boundary of British Columbia at or in the Yellow- head Pass, 115 miles.	George V., Chap. 7.	Oct. 29, 1912

†Against east-bound traffic.

‡Against west-bound traffic.

## SESSIONAL PAPER No. 20

Department of Railways and Canals during the Fiscal Year ended March 31, 1913.

Amount of Guarantee.	Number of Miles Subsidized.	Maximum Grade Feet per Mile.	Radius of Curvature not less than.	Width of Clearing each side.	Width of Cutting.	Embankment.	Steel Rails, lbs. per lineal yard.	Date of Completion.
Guarantee of principal and interest of securities of the Company to the extent of \$35,000 per mile.	115	Feet. 716	Feet. 26-40  31-68	Feet. 50	Feet. 20	Feet. 15	Lbs. 80	May 4th, 1915.

H. F. ALWARD,

*Departmental Solicitor.*

4 GEORGE V., A. 1914

## SUBSIDY AGREEMENTS for the construction of Railways

No of of Contract.	Date of Signature.	Railway Company.	Line of Railway or Work subsidized.	Authority for Execution.	
				Act of Parliament.	Order in Council.
	1912.				1912.
(a) 19646	Sept. 27...	The Algoma Central and Hudson Bay Ry. Co.	From Sault Ste. Marie to point on C.P.R. between White River and Dalton station.	Canada, 1912, Chap. 48.	June 29....
(b) 19806	Dec. 28..	" "	From a point on the Canadian Pacific Railway, northerly towards the National Transcontinental Railway.	Can., 1912, c. 48.	Dec. 24....
(c) 19807	Dec. 28..	" "	From a point 50 miles northerly from junction of its line with C.P.R. northerly to a junction with the N.T.R.	Can., 1912, c. 48.	Dec. 24....
(d) 19545	June 11..	The Canadian Pacific Railway Company.	From a point at or near Teulon to a point on the Icelandic River, in lieu of subsidy granted by cap. 43 of 1906.	Can., 1912, c. 48.	May 2....
19605	Aug. 27..	The Canadian Northern Pacific Railway Company.	From point at Yellowhead Pass to Vancouver and the mouth of the Fraser River.	Can., 1912, c. 49.	June 29....
19609	Aug. 2..	The Canadian Pacific Ry. Co. (lesses of the Calgary and Edmonton Ry. Company).	Towards the construction of a railway bridge over the Saskatchewan River connecting Strathcona and Edmonton.	Can., 1912, c. 48.	June 8....
	1913.				1913.
19884	Feb. 1..	Central Railway Co. of Canada.	Line of railway at or near Ste. Agathe des Monts station towards township of Howard, in Co. of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction.	Can., 1912, c. 48.	Jan. 2....
	1912.				1912.
19475	June 1..	The Dominion Atlantic Railway Co	From a point on the Dominion Atlantic Railway to Government pier or wharf at Canning.	Can., 1910, c. 51.	Feb. 20....
19578	July 2..	" "	From Centreville on the Dominion Atlantic Ry. westerly to Weston, in lieu of subsidy granted by Chap. 63 of 1908, section 1, item 30.	Can., 1910, c. 51.	Feb. 30 and May 22..
(e) 19689	Oct. 19..	The Esquimalt and Nanaimo Railway Company.	From Wellington to Alberni in lieu of Chap. 63 of 1908, section 1, item 35.	Can., 1912, c. 48.	June 29....
(f) 19491	June 13..	The Fredericton and Grand Lake Coal and Railway Co.	From a point on I.C.R. at Gibson to a point at or near Minto, together with a branch line from point on above mentioned line to Marysville.	Can., 1912, c. 48.	May 30 and June 29...
19643	Sept. 12..	The Great Northern Mining and Railway Co., Ltd.	From Little River through Belle Marche to Eastern Harbour.	Can., 1912, c. 48.	Aug. 26....

## SESSIONAL PAPER No. 20

entered into during the Fiscal Year ended March 31, 1913.

Amount of Subsidy.		Number of miles subsidized.	Maximum grade feet per mile.	Radius of curvature not less than.	Width of cutting each side.	Width of Cutting.	Embankment.	Steel rails, lbs. per lineal yard.	Date of Completion.
Per Mile.	Not exceeding.								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400	200	106	478	50	20	15	56	Aug. 1, 1916.
3,200	6,400	50	32	955	50	20	15	56	Aug. 1, 1914.
3,200	6,400	65	32	1,910	50	20	15	56	Aug. 1, 1914.
3,200	6,400	35	21	1,910	50	20	15	56	Jan. 1, 1912.
12,000	12,000	525	26.40	717	50	20	15	56	July 1, 1914.
	126,000								Aug. 1, 1916.
3,200	6,400	15	98	478	50	20	15	56	Aug. 1, 1916.
3,200	6,400	1	52.80	717	50	20	15	56	Dec. 31, 1912.
3,200	6,400	15	80	1,433	50	20	15	56	Aug. 1, 1914.
3,200	6,400	60	80 116	573 410	50	*18 **16	14	56	Aug. 1, 1913.
3,200	6,400	35	63.4	955.36	50	20	15	56	Aug. 1, 1916.
3,200	6,400	3	92	819	50	20	15	56	Aug. 1, 1913.

4 GEORGE V., A. 1914

## SUBSIDY AGREEMENTS for the construction of Railways entered

Number of Contract.	Date of Signature.	Railway Company.	Line of Railway or Work Subsidized.	Authority for Execution.	
				Act of Parliament.	Order in Council.
19587	July 18..	Ha Ha Bay Railway Company.	(a) From a point on Quebec and Lake St. John Railway in Tp. of Jonquieres, at or near St. Mathias, to Ha Ha Bay; not exceeding 20 miles; (b) From Labrosse Junction to the Saguenay River, northerly through the town of Chicoutimi; not exceeding 5 miles; (c) From La Terriere Junction, southerly to Lake Kenogami, via La Terriere village; not exceeding 12 miles; (d) From a point on the Ha Ha Bay Railway, at or near Bagotville village, easterly, to the village of St. Alexis; not exceeding 3 miles.	Can., 1912, c. 48.	May 23 and June 29..
19494	June 11..	The Joliette and Lake Manuan Colonization Ry. Co.	From Joliette to or near Lake Manuan.	Can., 1910, c. 51.	May 23....
19489	June 12..	The North Railway Company.	From point near Montreal to Mile 837 west of Moncton of the N. T. Railway 200 miles; and from point on N. T. Railway near Mile 837 west of Moncton in a northerly and northwesterly direction, 300 miles.	Can., 1912, c. 48.	June 7....
(g) 19577	July 18..	The Northern New Brunswick and Seaboard Ry. Co.	From Drummond Mines at Austin Brook to point on I.C.R., from such point to Alston Point.	Can., 1912, c. 48.	April 17 and May 2....
(h) 19560	June 29..	Quebec and Saguenay Ry. Co.	From St. Joachim, northeasterly.	Can., 1912, c. 48.	May 23....
19648	Sept. 25..	Quebec Central Ry. Company.	Extension of line of railway from point (30 miles from St. George in parish of St. Justine, Co. of Dorchester, to a point in parish of St. Sabine, Co. of Bellechasse.	Can., 1912, c. 48.	July 19....
(i) 19492	May 14..	The Southampton Ry. Co.	From point at or near Millville to a point on the St. John River, near the Pokiok Bridge.	Can., 1912, c. 48.	May 2 and June 1..
19705	Nov. 5..	The Saint John and Quebec Ry. Co.	From St. John to Grand Falls, N.B., exclusive of a railway bridge across Kennebecasis River, at or near Perry Point and two railway bridges across St. John River.	Can., 1912, c. 48.	Oct. 19....

(a) Cancels and supersedes Subsidy Agreement No. 19258, dated Oct. 21st, 1911.

(b) Varied by Supplemental Agreement No. 19808.

(c) Varied by Supplemental Agreement No. 19809.

(d) Supersedes Subsidy Agreement No. 16776, dated Sept. 28, 1907.

(e) Cancels and supersedes No. 17151, dated May 27th, 1908.

(f) Permission to use 72 and 73 lb. used rails granted by authority.

Permission to use, in branch line, 56 pound used steel rails.

Varied by No. 19681. Modified by endorsement dated Dec. 21, 1912, as to curvature

## SESSIONAL PAPER No. 20

into during the Fiscal Year ended March 31, 1913—*Continued.*

Amount of Subsidy.		Number of Miles Subsidized.	Maximum Grade Feet per Mile.	Radius of Curvature not less than.	Width of Clearing each Side.	Width of Cutting.	Embankment.	Steel Rails, lbs. per lineal yard.	Date Completion.
Per Mile.	Not exceeding.								
\$	\$		Feet.	Feet.	Feet.	Feet.	Feet.	Lbs.	
3,200	6,400	20	66	573	50	20	15	56	April 25, 1913.
		5	317	153	50	20	15	56	April 25, 1913.
		12	148	573	50	20	15	56	April 25, 1913.
		3	63	573	50	20	15	56	April 25, 1913.
3,200	6,400	60	79·2	953·36	50	20	15	56	April 1, 1914.
3,200	6,400	200	716	26·40 31·68	50	20	15	80	Aug. 1, 1916.
		300							
3,200	6,400	26	80	717	50	20	15	56	Dec. 1, 1913.
3,200	6,400	62·8	66	573	50	20	15	56	Aug. 1, 1916.
3,200	6,400	1·34	52·80	1,146·3	50	20	15	56	Aug. 1, 1916.
3,200	6,400	13	79·2	819·02	33	20	15	52	Aug. 1, 1916.
3,200	6,400	228	53	818	49½	20	16	80	Nov. 1, 1915.

(g) Superseded by Subsidy Agreement No. 20151.

(h) Supersedes Subsidy Agreement No. 19367, dated Feb. 2, 1912.

(i) Varied by No. 19700.

†Against east-bound traffic.

‡Against west-bound traffic.

\*In earth.

\*\*In rock.

H. F. ALWARD,  
Departmental Solicitor.

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.

## INTERCOLONIAL RAILWAY.

Number of Contract.	Date of Signature.	Contractors:	Description.
	1912.		
19442	April 9.	R. O. McCurdy & Co.....	Erection and completion of a brick freight shed at Truro, N.S.
19481	June 1.	Frank W. Wilson.....	Moving of part of old Station and building used by yardmen at Truro, N.S.
19482	June 1.	Nova Scotia Car Works, Limited.	Delivery of 373 Steel Framed Box Cars, 60,000 lbs. capacity.
19483	June 1.	The Preston Car and Coach Company, Limited.	Delivery of One Vestibule First-class Day Coach.
19484	June 1.	The Canadian Locomotive Company, Limited.	Delivery of 5 Consolidation Freight Locomotives.
19485	" 1.	James Pender & Company, Limited.	For the construction of a siding connecting Contractor's buildings and premises with Intercolonial Railway at St. John, N.B.
19495	" 1.	City of Fraserville.....	Supply of water.
19542	" 20.	Canadian Car and Foundry Company, Limited.	Delivery of 10 Refrigerator Cars.
19544	" 20.	Canadian Car and Foundry Company, Limited.	Delivery of 20 steel underframe stock cars.
19561	" 29.	The Canadian Locomotive Company, Limited.	Delivery of 4 Simple Switching Engines.
19589	July 20.	Canadian Sand Blast Company, Limited.	Sandblasting stonework of old portion of Intercolonial Railway general office building at Moncton, N.B.
19590	April 29.	The Pullman Company.....	Delivery of 1 Dining Car.
19591	" 29.	" " " " " " " "	Delivery of 2 Sleeping cars.
19598	July 20.	La Compagnie D'Aqueduc de St. Pierre.	Supply water at St. Pierre, Montmagny, P.Q.
19623	Aug. 21.	Sumner Company.....	Supply and installation of a hot water heating system in new wing of General Office Building at Moncton, N.B.
19631	Sept. 5.	John McQuarrie and Dan. A. McDonald.	Addition to Freight Shed at Stellarton, N.S.
19644	" 21.	Thomas McAloney.....	Handling coal at Springhill Junction, N.S.
19645	" 20.	LeBlanc and Leger.....	Erection and completion of a Standard Passenger Station and Dwelling at Nelson, N.B.
19649	" 30.	Saint John Railway Company.....	Privilege to cross Intercolonial Railway tracks on the level at Brussels Street, St. John, N.B.
19651	" 26.	Charles E. Smith.....	Erection of an addition to No. 7 Pier, and rock excavation at Richmond, N.S.
19652	" 26.	William Cooke.....	Ballasting of Sydney Mines Diversion.
19656	Oct. 3.	William P. McNeil and Company, Limited.	Supply and delivery of 75 ft. through steel turntable at Point Tupper, N.S.
19660	" 3.	S. H. Stevenson.....	Addition to freight shed at Sydney, N.S.
19661	" 3.	Jesse C. Stewart.....	Addition to freight shed at Sydney Mines, N.S.
19662	" 3.	D. H. McLean.....	Erection of a combined standard passenger station dwelling and freight shed at Little Bras D'Or, N.S.
19663	" 3.	D. H. McLean.....	Erection of a combined standard passenger station, dwelling and freight shed at Florence, N.S.
19669	" 8.	Emile Dube.....	Erection of a brick and stone passenger station at Ste. Flavie, Que.
19684	" 19.	Morrison and Clark.....	Erection and completion of a ten stall engine house and annex, a brick chimney with concrete foundation, &c., at Point Tupper, Co. of Richmond, N.S.

## SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*INTERCOLONIAL RAILWAY—*Concluded.*

Number of Contract.	Date of Signature.	Contractors.	Description.
1912.			
19686	Oct. 19..	J. A. Boulay.....	Erect and complete Freight Sheds at Kempt and St. Anaclet, Que.
19687	" 22..	John C. McLean.....	Erection of addition to freight portion of station building at Eel River, N.B.
19699	" 26..	J. W. Begin.....	Erection of passenger station, and moving and re-modelling of present station for a dwelling at Sayabec, Que.
19713	Nov. 11..	D. R. Morrison and P. G. Clark..	Erection of Passenger station at Chatham, N.B.
19714	" 13..	The Dominion Express Company..	The right to carry on business of express company.
19715	" 11..	The Canadian Locomotive Company, Limited.	Delivery of 4 Simple Switching Engines.
19716	" 11..	The Canadian Locomotive Company, Limited.	Delivery of 5 Consolidation Freight Locomotives.
19718	" 16..	The Montreal Locomotive Works, Limited.	Deliver 5 Consolidation Freight Locomotives.
19795	Dec. 14..	D. H. McLean.....	Erection of a Brick and Stone Passenger Station at Point Tupper, N.S.
19796	" 17..	Canada Foundry Company, Limited.	Delivery of 5 Consolidation Freight Locomotives.
19797	" 18..	Canadian Sand Blast Company, Limited.	Sandblasting and painting Intercolonial Railway bridge at Grand Narrows, C.B., N.S.
19798	" 18..	Godfroid Boulay.....	Erection of an addition to freight shed at Rimouski, Que.
19817	" 20..	The Moncton Tramways, Electricity and Gas Company, Limited.	Supply of natural gas for the operations of the Intercolonial Railway at Moncton, N.B.
19824	" 27..	The Dominion Iron and Steel Company, Limited.	Delivery of 5,000 tons of steel rails.
1913.			
19828	Jan. 4..	D. H. McLean.....	Erection of a two-apartment dwelling at Point Tupper, N.S.
1912.			
19835	July 22..	Canadian Car and Foundry Company, Limited.	Delivery of 2 Sleeping cars.
19837	Dec. 20..	The Commissioners of the Trans-continental Railway.	Respecting the use of the terminals of the I.C.R. at Moncton, N.B.
1913.			
19891	Jan. 30..	Canadian Car and Foundry Company, Limited.	Delivery of 100 Steel Underframe Flat Cars of 80,000 lbs. capacity.
19892	" 30..	Canadian Car and Foundry Company, Limited.	Delivery of 1 Dining Car.
19893	" 30..	Canadian Car and Foundry Company, Limited.	Delivery of 50 all steel Hart-Otis Coal Cars of 100,000 lbs. capacity.
19894	Feb. 1..	Ernest Dionne.....	Erection of a Rest House at Rivière du Loup, Que.
19895	" 3..	Canadian Car and Foundry Company, Limited.	Delivery of 250 steel frame box cars.
19897	" 1..	Polycarpe Ouellet.....	Erection of a Standard Sand House at Rivière du Loup, Que.
19898	" 6..	The Canadian H. W. Johns-Manville Company, Limited.	Cork insulation of roof of passenger car repair shop at Moncton, N.B.
19903	" 10..	Rhodes, Curry Company, Limited	Erection of an addition to Freight Car Repair Shop at Moncton, N.B.
19908	" 12..	The Bennett and Wright Company, Limited.	Supply and installation of Vacuum Car Cleaning Plants at St. John and Moncton, N.B.

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CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*INTERCOLONIAL RAILWAY—*Concluded.*

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
19917	Feb. 18..	Dominion Iron and Steel Company, Limited.	Delivery of 5,000 gross tons of No. 1 steel rails.
19930	" 26..	Canadian Car and Foundry Company, Limited.	Delivery of 1 Vestibule First-class Day Coach.
19942	Mar. 14..	The Preston Car and Coach Company, Limited.	Supply and delivery of 3 Baggage cars.
19966	Feb. 20..	Fraser and Chalmers, Limited....	Delivery of a No. 2 size Bettington Boiler, together with one extra pulverizer complete for Moncton shops.

## HUDSON BAY RAILWAY.

	1912.		
19421	April 9..	Canada Foundry Company, Limited.	Construction of a railway bridge over the Saskatchewan River at Le Pas.
19546	June 13..	The Steel Company of Canada, Limited.	Delivery of 3,200 kegs of track spikes.
19593	" 28..	Canadian Tube and Iron Company, Limited.	Delivery of 840 kegs of track bolts and nuts.
19638	Sept. 20..	J. D. McArthur.....	Construction of section, Thicket Portage to Split Lake Junction, 68 miles.
19647	" 20..	Canadian Steel Foundries, Limited	Delivery of 40 sets of switches and frogs.
19799	Dec. 17..	J. D. McArthur.....	Construction of Section from Split Lake Junction to Port Nelson, 165 miles.
	1913.		
19833	Jan. 16..	The Algoma Steel Company, Limited.	Delivery of 12,000 tons of steel rails.
19896	" 30..	The Algoma Steel Company, Limited.	Delivery of 40,000 Sellers Anchor Bottom Tie Plates.
19899	Feb. 6..	The Steel Company of Canada, Limited.	Delivery of 6,800 kegs of railway spikes, 200 lbs. to the keg.
19900	Jan. 30..	The Algoma Steel Company, Limited.	Supply and delivery of 680 gross tons of steel splice bars.
19904	Feb. 10..	Canadian Steel Foundries, Limited	Delivery of 70 sets switches and frogs, being 60 sets of No. 10 and 10 sets of No. 8.
19905	" 6..	The Steel Company of Canada, Limited.	Delivery of 1,320 gross tons of Splice bars.
19906	" 10..	The Canadian Tube and Iron Company, Limited.	Delivery of 1,600 kegs of 200 lbs. each of bolts and nuts for steel rails.
19954	Mar. 29..	Dominion Iron and Steel Company, Limited.	Delivery of 24,000 tons of steel rails.

## QUEBEC BRIDGE.

	1912.		
19614	April 18..	The St. Lawrence Bridge Company, Limited, The Canadian Bridge Company, Limited, and The Dominion Bridge Company, Limited.	Modifying Contract No. 19,007, dated April 4, 1911, in respect of substitution of carbon steel eyebars for riveted plate members in building of top chords of cantilever and anchor arms.
19805	Dec. 26..	M. P. Davis and J. T. Davis.....	Modifying Contract No. 18,113, substructure of Quebec Bridge.

## SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*

## CORNWALL CANAL.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1913.		
19486	June 4..	G. R. Phillips.....	Improvement of Lower Entrance to Lock No. 15.
19487	" 6..	The Hamilton Bridge Works Company, Limited.	Delivery of a steel highway bridge over Old Lock No. 17 of Canal.
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland cement.

## FARRAN'S POINT CANAL.

	1913.		
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland cement.

## GALOPS CANAL.

	1912.		
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland Cement.
19696	Oct. 24..	Dominion Bridge Company, Limited.	Supply and erection of three steel trussed box girders for stop log purposes for needle dam at Lock No. 28.

## LACHINE CANAL.

	1912.		
19572	July 4..	Canada Cement Company, Limited.	Delivery of 43,425 bbls. of Portland cement for the Quebec Canals.

## MURRAY CANAL.

	1912.		
19608	Aug. 20..	The MacDonald Contracting Company, Limited.	Dredging of Canal.
19682	Oct. 19..	S. McLellan and J. Whitley.....	Erection of a bridge tender's residence on Canal.

## RAPIDE PLAT CANAL.

	1912.		
19570	July 4..	Canada Cement Company, Limited.	Delivery of Portland Cement.

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(CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*)

## RIDEAU CANAL.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1912.		
19441	April 12..	J. George Gravelle and Company.	Carboning and regulating arc lamps on electric light line of Canal from foot of locks to Laurier Bridge and patrolling between said points.
19460	" 18..	The Ottawa Transportation Company, Limited.	Supply of British Columbia or 'Douglas' Fir Dimension Timber for 1912-13.
19573	July 4..	Canada Cement Company, Limited.	Delivery of 750 bbls. of Portland Cement.
19603	" 25..	John Burns and William Waters...	Delivery of 2 side dumping scows for Canal dredging plant.
19650	Sept. 27..	Concrete Constructions, Limited..	Sandblasting and painting the following bridges: Elgin Street Bridge, Concession Street Bridge, Manotick, Merrickville, Oliver's Ferry, Newboro and Brass's Point.
19674	Oct. 12..	The W. H. Kelly Lumber Company.	Delivery of a Boom Dredge.
19688	" 22..	James Bogue.....	Construction of a Concrete Lining Wall along south side of cut below Detached Lock in Smith's Falls, Ont.
	1913.		
19826	Jan. 3..	The W. H. Kelly Lumber Company.	Delivery of a Wooden Tug for Canal dredging plant.

## SOULANGES CANAL.

	1912.		
19706	Nov. 6..	The Phoenix Bridge and Iron Works, Limited.	Supply and delivery of 18 Steel Stop Log Frames.

## SAULT STE. MARIE CANAL.

	1912.		
19604	Aug. 19..	Polson Iron Works, Limited.....	Delivery of a Steel Steam Screw Tug.

## TRENT CANAL.

	1912.		
19574	July 4	Canada Cement Company, Limited.	Delivery of 51,000 barrels of Portland Cement. (Supplemented for further delivery of 51,000 bbls. of Portland Cement.)
19667	Oct. 8..	Canadian General Electric Company, Limited.	Supply and erection of electrical equipment for Strauss Highway Bascule Bridge at Campbellford, Ont.
19717	Nov. 12..	The Hamilton Bridge Works Company, Limited.	Delivery and erection of a Strauss Bascule Railway Bridge and a Fixed Span Railway Bridge over Canal at Campbellford, Ont.
	1913.		
19943	Mar. 4..	Canadian General Electric Company, Limited.	Erection of electrical equipment for the Strauss Bascule Railway Bridge over Canal at Campbellford, Ont.

SESSIONAL PAPER No. 20

CONTRACTS entered into during the Fiscal Year ended March 31, 1913.—*Continued.*

## WELLAND CANAL.

Number of Contract.	Date of Signature.	Contractors.	Description.
	1912.		
19571	July 4.	Canada Cement Company, Limited.	Delivery of Portland Cement.
19630	Sept. 5.	M. J. Hogan.....	Removal of old pier and extension of the east docking at Port Colborne Extrace of Canal.
19653	" 26.	James Battle and N. W. Gowan...	Supply and delivery of 20 steel castings forming the Gowan Safety Appliances for lock gates.
19800	Nov. 14.	Dominion Bridge Company.....	Supply and erection of the steel superstructure of proposed addition to Port Colborne Elevator.

H. F. ALWARD,

*Departmental Solicitor.*

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## WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
	1912.		
19497	June 1	Wood and McConnell, Ltd.....	Priv. to lay and maintain a 4" cast iron pipe across the lands and under the tracks of the I. C. Railway at Sydney, C.B..
19551	" 18	John Sherman & Son.....	Land at River Philip, Co. of Cumberland, N.S.....
19552	" 11	James Casey.....	Land at Shediac, Co. of Westmorland, N.B.....
19555	" 12	Town of Campbellton.....	Priv. to lay and maintain a 6" terra cotta sewer pipe through reserve land at Campbellton, N.B.....
19554	" 11	Herbert B. Steeves.....	Land, pt. of Ballast Pit property in Town of Shediac, Co. of Westmorland, N.B.....
19579	July 4	Roberts, Simpson & Co.	Land at Point du Chêne, Co of Westmorland, N.B.....
19580	June 28	The Tudhope Carriage Company, Limited.....	Land at Hopewell, N.S.....
19581	July 4	Joseph Beaulieu.....	Priv. to lay and maintain a $\frac{3}{4}$ inch wrought iron pipe across lands and under tracks of I. C. Railway at Cedar Hall, Que...
19582	" 4	William P. McNeil & Co., Ltd.....	Land at New Glasgow, Co. of Pictou, N.S.....
19599	" 20	Maritime Telegraph and Telephone Company, Ltd.....	Priv. to lay and maintain a 4" terra cotta conduit across lands and under tracks of I. C. Railway at New Glasgow, N.S....
19601	" 20	Town of Shediac.....	Land at Shediac, N.B.....
19602	" 20	Autosales Gum and Chocolate Company..	To place automatic selling machines in station buildings of I. C. Railway.....
		6	
19610	Aug. 7	Municipality of Lauson..	Land at Lauson, Co. of Levis, Que.....
a19629	Sept. 30	Alexander McIsaac.....	Land at Sydney, C.B.....
	1912		
19639	Sept. 5	Jessie E. Harper.....	Ballast pit property in Town of Shediac, N.B.....
19640	" 5	The St. John Railway Company.....	Priv. to connect line of railway with the Courtenay Bay Branch of the I. C. R. at point on Erin Street, St. John, N.B.....
19649	" 30	The St. John Railway Company.....	Priv. of crossing I. C. R. tracks on level at Brussels Street, St. John, N.B.....
19665	Oct. 7	Haliburton B. McLaughlin.....	Land at Folley, Co. of Colchester, N.S.....
19668	" 3	William C. Cummings..	Land at Doaktown Co. of Northumberland, N.B.....
19671	" 7	McKay Sutherland.....	Land at Brown's Point, Co. of Pictou, N.S.....
19675	Sept. 20	E. Pelletier.....	Right and priv. to lay and maintain a pipe line across lands and under tracks at Ste. Louise Station, Que.....
19676	Oct. 12	The Maritime Telegraph and Telephone Co., Ltd.....	Priv. to lay and maintain 2 underground conduits across lands and under tracks of I. C. R. at George and Townsend Streets, Sydney, N.S.....
19677	Sept. 20	The Moncton Tramways, Electricity and Gas Company, Limited.....	Priv. to lay and maintain a 4" wrought iron gas pipe on the I. C. Railway Wharf Track Branch from Foundry Street to Mechanic Street, Moncton, N.B.....
19685	Oct. 19	The Moncton Tramways, Electricity and Gas Company, Limited.....	Right and privilege to cross I. C. R. on a level and string trolley wires at Main Street, East Crossing, Moncton, N.B.....

a Too late for last year's report.

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
470.25 sq. ft.	During pleasure.	Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.
0.924 acre.	"	April 1, 1912.	1 00	April 1....	April 1, 1912.
	"	1, 1912.	5 00	1....	1, 1912.
	"	Dec. 1, 1911.	1 00	Dec. 1....	Dec. 1, 1911.
0.091 acre.	"	April 1, 1912.	1 00	April 1....	April 1, 1912.
0.14 acre.	"	" 1, 1912.	5 00	April 1....	April 1, 1912.
2,750 sq. ft.	"	Dec. 1, 1911.	5 00	Dec. 1....	Dec. 1, 1911.
	"	" 1, 1911.	1 00	Dec. 1....	Dec. 1, 1911.
6,400 sq. ft.	"	Mar. 1, 1912.	5 00	Mar. 1....	Mar. 1, 1912.
	"	Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.
4.66 acre.	"	April 1, 1912.	1 00	April 1....	April 1, 1912.
	3 yrs. from April 1, 1912, renewable.		35% of gross collec- tions to railway and 10% to Agent, monthly.		
156 sq. ft.	During pleasure.	Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.
0.6 acre.	"	Sept. 30, 1911.	20 00	Sept. 30....	Sept. 30, 1911.
0.099 acre.	"	July 1, 1912.	1 00	July 1....	July 1, 1912.
	"	April 1, 1912.	1 00	April 1....	April 1, 1912.
	99 years from Oct. 1, 1912.				
1,740 sq. ft.	During pleasure.	Oct. 1, 1912.	1 00	Oct. 1....	Oct. 1, 1912.
4,700 sq. ft.	"	Sept. 1, 1912.	5 00	Sept. 1....	Sept. 1, 1912.
3,750 sq. ft.	"	" 1, 1912.	5 00	Sept. 1....	" 1, 1912.
	"	" 1, 1912.	5 00	" 1....	" 1, 1912.
	"	Aug. 1, 1912.	1 00	Aug. 1....	Aug. 1, 1912.
	"	July 1, 1912.	1 00	July 1....	July 1, 1912.
	"	" 1, 1912.	5 00	July 1....	" 1, 1912.
	"	Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.

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## WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19690	Oct. 19	The Atlantic Lumber Company, Limited....	Priv. to lay and maintain one 10" blow-pipe across the lands and under tracks of the I.C.R. at a point 9.06 miles east of Truro, N.S.....
19691	" 19	Hiram D. McLean.....	Priv. to lay and maintain a 10" blow-pipe across lands and under tracks of I.C.R. at a point 8.99 miles east of Truro, N.S....
19692	" 19	Corporation of the Seminary of Rimouski....	Priv. to lay and maintain a 1" water pipe across right of way and under tracks of the I.C.R. near station at Rimouski, Que.....
19693	" 21	The River Philip Lumber and Sluice Company.....	Priv. to lay and maintain a sluice-way under eastern span of River Philip Bridge and across right of way of I.C.R. at point .35 miles west of Oxford Junction Station, N.S.....
19701	" 26	The New Brunswick Telephone Co., Ltd....	Priv. to erect and maintain a telephone wire across tracks of I.C.R. at Painssee Junction, Co. of Westmorland, N.B.....
19702	" 26	The New Brunswick Telephone Co., Ltd.....	Priv. to erect and maintain telephone wires across lands and over tracks of I.C.R. at point 1,716 feet east of Mile Post 42 from St. John, and at point 588 feet west of Mile Post 42 from St. John.....
19707	Nov. 2	Thomas G. Scott.....	Land at Dalhousie Co. of Restigouche, N.B.....
19708	" 2	Charles A. Ross.....	Land at Pictou Landing, Co. of Pictou, N.S.....
19721	" 16	Price Brothers and Company, Limited.....	Land at Montmagny, Co. of Montmagny, Que.....
19724	" 20	Moncton Tramways, Electricity and Gas Co., Ltd.....	Priv. to lay, maintain and operate extension of street railway on John Street, Moncton, N.B., from boundary line of I.C.R. property towards railway shops, 665 feet.....
19726	" 20	The New Brunswick Telephone Company, Limited.....	Priv. to stretch and maintain six telephone wires across tracks of I.C.R. at public crossing 376 feet west of Loggieville Station, N.B.....
19802	Dec. 17	The Acadia Coal Company, Limited.....	Priv. to erect and maintain 2 telephone wires across lands and tracks of I.C.R. at a point 600 feet west of Lourdes Station, N.S.....
19803	" 17	Leon N. Cotnoir.....	Land at St. Germain, Co. of Drummond, Que.....
19811	" 20	The Acadia Telephone Company.....	Priv. to erect and maintain telephone poles and wires on I.C.R. lands at Rogersville, N.B.....
19812	" 20	J. Alfred Savoie and J. Alcide Savoie.....	Land at Manseau, Co. of Nicolet, Que.....
19813	" 20	Municipality of St. Romuald.....	Priv. to lay and maintain a 4" water pipe and an 8" sewer pipe across lands and under tracks of I.C.R. at St. Romuald, Co. of Levis, Que.....
19814	" 20	John Edward McDonald	Land at Belmont, Co. of Colchester, N.S.....
19815	" 20	The Moncton Tramways Electricity and Gas Company, Limited....	Priv. to stretch and maintain 4 wires for lighting purposes across lands and tracks of I.C.R. on line of George St., Moncton, N.B.....
19816	" 20	The Moncton Tramways, Electricity and Gas Company, Limited....	Priv. to lay and maintain pipes for the conveyance of natural gas under tracks of I. C. Railway at certain crossings in the City of Moncton, N.B.....
19825	" 27	John Herbert Shaw.....	Land at Pictou Landing, Co. of Pictou, N.S.....

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
.....	During pleasure.....	Aug. 1, 1912.	1 00	Aug. 1....	Aug. 1, 1912.
.....	" .....	" 1, 1912.	1 00	" 1....	" 1, 1912.
.....	" .....	Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.
.....	" .....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
.....	" .....	Aug. 1, 1912.	1 00	Aug. 1....	Aug. 1, 1912.
.....	" .....	Sept. 1, 1912.	2 00	Sept. 1....	Sept. 1, 1912.
525 sq. ft. ....	" .....	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
6,600 sq. ft. ....	" .....	Sept. 1, 1912.	5 00	Sept. 1....	Sept. 1, 1912.
1,264 sq. ft. ....	" .....	Oct. 1, 1912.	1 00	Oct. 1....	Oct. 1, 1912.
6,756 sq. ft. 192 sq. ft.					
.....	" .....	" 1, 1912.	1 00	Oct. 1....	" 1, 1912.
.....	" .....	" 1, 1912.	1 00	" 1....	" 1, 1912.
.....	" .....	" 1, 1912.	1 00	" 1....	" 1, 1912.
3,500 sq. ft. ....	" .....	" 1, 1912.	5 00	" 1....	" 1, 1912.
.....	" .....	Jan. 1, 1910.	1 00	Jan. 1....	Jan. 1, 1910.
687 sq. ft. ....	" .....	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
.....	" .....	" 1, 1912.	1 00	" 1....	" 1, 1912.
300 sq. ft. ....	" .....	" 1, 1912.	1 00	" 1....	" 1, 1912.
.....	" .....	" 1, 1912.	1 00	" 1....	" 1, 1912.
.....	" .....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
5,000 sq. ft. ....	" .....	Sept. 1, 1912.	5 00	Sept. 1....	Sept. 1, 1912.

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## WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19834	1913 Jan. 4	City of St. John.....	Priv. to lay and maintain a 36" pipe across lands and under tracks of I.C.R. at St. John, N.B.....
619960	" 7	Atlantic Sugar Refining Company, Limited....	Land in the City of St. John, N.B.....
19996	Mar. 20	The Adamsville Telephone Company, Limited.....	Priv. to stretch and maintain a telephone wire across main line of I.C.R. at Adamsville, Co. of Kent, N.B.....

## PRINCE EDWARD

19465	1912 Apr. 30	G. DesRoches & Company.....	Land at Miscouche, Co. of Prince, P.E.I.....
19804	Dec. 18	M. C. Delaney.....	Land at Albany Station, P.E.I.....
19818	" 20	Benjamin Gallant.....	Land at Bloomfield, P.E.I.....
19819	" 20	Daniel W. Howard.....	Land at Milton Station, P.E.I.....
19910	1913 Jan. 30	Government of Prince Edward Island.....	Priv. to lay and maintain a sewage pipe across right of way of railway in Royalty of Charlottetown, P.E.I.....

## LACHINE

19434	1912 Apr. 9	Dominion Flour Mills, Limited.....	Priv. to construct and maintain a concrete tunnel under and across Canal lands opposite Cad. Lot. No. 3412-4, in Par. of Montreal, Que.....
*19435	" 9	Dominion Cartridge Company, Limited.....	Priv. to maintain a 3" water pipe from Canal to Lessee's property on Cadastral Lot No. 2152, St. Henri, Montreal; and draw water.....
19461	" 25	The Steel Company of Canada, Limited.....	Land on north bank of Canal near River St. Pierre Culvert....
19462	" 25	The Canadian Pacific Railway Company.....	Priv. to lay, maintain and operate a siding on south side of Canal, in St. Paul Ward, Montreal.....
19488	June 1	Town of Lachine.....	Priv. to erect and maintain on Canal lands above Lachine Locks, two steel towers to carry electric wires across Canal.....
19499	" 1	The William Rutherford and Sons Company, Ltd.....	Land on North West side of Canal near Brewster's Bridge in Town of Ste. Cunegonde, Parish of Montreal.....
19548	" 11	Page Hersey Iron, Tube and Lead Company, Ltd.....	Land at St. Henry, Montreal.....
19549	" 1	The N.K. Fairbank Company, Limited....	Priv. to lay and maintain a sewer across Canal lands and under Canal from Lessee's works on Cad. Lot No. 1020, Par. of Lachine, to Collecting drain on North side of Canal.....
†19553	" 12	City of Montreal.....	Land, part of Cad. Lot No. 327 in Ste. Ann's Ward, Montreal..

b Letters Patent.

\*Supersedes Lease No. 16900 dated Nov. 21, 1907.

†Cancels or supersedes Lease No. 19168.

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
.....	During pleasure.....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
0.66 acre.....	21 years.....	Jan. 7, 1913.	1 00	Jan. 7....	Jan. 7, 1913.
.....	During pleasure.....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.

## ISLAND RAILWAY.

1,250 sq. ft.....	During pleasure.....	Mar. 1, 1912.	5 00	Mar. 1....	Mar. 1, 1912.
1,050 sq. ft.....	".....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
625 sq. ft.....	".....	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
690 sq. ft.....	".....	Nov. 1, 1912.	5 00	Nov. 1....	Nov. 1, 1912.
.....	".....	Oct. 1, 1911.	1 00	Oct. 1....	Oct. 1, 1911.

## CANAL.

.....	During pleasure.....	Mar. 1, 1912.	20 00	Mar. 1....	Mar. 1, 1912.
.....	".....	Feb. 1, 1912.	60 00	Feb. 1....	Feb. 1, 1912.
1,500 sq. ft.....	".....	Mar. 1, 1912.	45 00	Mar. 1....	Mar. 1, 1912.
.....	".....	April 1, 1912.	96 00	April 1....	April 1, 1912.
.....	".....	" 1, 1912.	25 00	" 1....	" 1, 1912.
5,550 sq. ft.....	".....	May 1, 1912.	333 00	May 1....	May 1, 1912.
3,800 sq. ft.....	".....	" 1, 1912.	152 00	" 1....	" 1, 1912.
.....	".....	April 1, 1912.	50 00	April 1....	April 1, 1912.
6,600 sq. ft.....	21 years renewable....	May 1, 1912.	5 00	May 1....	May 1, 1912.

4 GEORGE V., A. 1914

## WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
	1912		
c19588	July 19	The Ottawa Forwarding Company, Limited...	Space, Flour Shed No. 1, fronting on Basin No. 4.....
19594	" 20	G. E. Jacques & Company.....	Space, Flour Shed No. 3, fronting on Basin No. 3.....
19595	" 20	G. E. Jacques & Company.....	Space, St. Gabriel Shed No. 1, on St. Gabriel Basin No. 1....
d19596	" 20	The Canadian Sand and Gravel Company.....	Land on south bank of Canal, west of St. Gabriel Lock.....
19600	" 20	J. W. Norcross.....	Flour Shed No. 2 on Basin No. 3, and Flour Sheds Nos. 4 and 5 on North side of Basin No. 2.....
19616	Aug. 20	Matthews-Laing, Ltd....	Land on south east side of Mill Street, fronting on Oak Street, at Point St. Charles.....
19620	Aug. 7	The Hall Engineering Works.....	Tate Dry Dock and Canal lands, being pt. of Cad. Lot No. 326, in Parish of Montreal.....
e19641	Sept. 5	Montreal Park and Island Railway.....	Lots 1005, 950 and 964 of Par. of Lachine, Co. of Jacques Cartier, Que.....
19642	" 5	Montreal Park and Island Railway.....	Part of Lot No. 3606 of Par. of Montreal, Co. of Jacques Cartier, Que.....
19678	Oct. 12	Canadian Car and Foundry Company, Limited.....	Priv. to lay and maintain and operate on Canal lands, on north bank of Canal, a track 2,000 feet long.....
19683	Sept. 25	The Bell Telephone Company of Canada, Ltd.....	Priv. to erect and maintain 2 poles on north side of Canal for purposes of running wires to premises of Dominion Mahogany and Veneer Company.....
19694	Oct. 22	The Imperial Oil Company, Limited.....	Priv. to lay and maintain three 6-inch iron pipes under Canal lands at Cote St. Paul.....
f19801	Dec. 17	The Grand Trunk Railway Company of Canada.....	Priv. to lay, maintain and operate railway tracks on Canal lands west of Wellington Basin.....
19820	" 20	City of Montreal.....	Priv. to lay and maintain a 36" water main under Canal on line of Seminary Street.....
	1913		
19829	Jan. 9	Andrew Baile .....	Land, part of Lot No. 324 on west side of Wellington Basin, St. Anne's Ward, Montreal.....
	1912		
19830	Dec. 17	Canadian Pacific Ry. Co.....	Priv. to lay and maintain 2 12" water pipes across Canal lands and under Canal near swing bridge.....
19831	" 27	Canadian Pacific Ry. Co.....	Priv. to lay and maintain and operate spur line of railway on Canal land from Boundary stone No. 77 and connecting with south branch line, 240 feet.....

c Assigned to The Ottawa Transportation Company, Limited, by No. 19933.

d Surrendered.

e Cancels Lease No. 12294, of March 5th, 1896, and supersedes said Lease as to part of Lots Nos. 950, and 964.

f Cancels and supersedes Lease No. 8735, dated Feb. 1st, 1888.

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
14,122.5 sq. ft.....	5 years.....	May 1, 1912.	2,118 37½	May 1....	May 1, 1912.
7,078.8 sq. ft.....	5 ".....	Oct. 1, 1912.	1,061 82	Oct. 1....	Oct. 1, 1912.
30,260 sq. ft.....	5 ".....	May 1, 1912.	3,631 20	May 1....	May 1, 1912.
13,500 sq. ft.....	During pleasure.....	" 1, 1912.	405 00	" 1....	" 1, 1912.
13,949.5 sq. ft. 6,212.5 "					
9,256.4 "	5 years.....	" 1, 1912.	5,465 19	" 1....	" 1, 1912.
15,491 sq. ft.....	17 " 10 mos.....	" 1, 1912.	620 00	" 1....	" 1, 1912.
	10 ".....	" 1, 1912.	4,000 00	" 1....	" 1, 1912.
4.7815 acre.....	6 ".....	" 1, 1911.	10 00	" 1....	" 1, 1911.
0.233 arp. 0.215 arp.					
6,672 sq. ft.....	21 years.....	June 1, 1910.	66 72	June 1....	June 1, 1910.
	During pleasure.....	Oct 1, 1912.	640 00	Oct. 1....	Oct. 1, 1912.
	".....	Sept. 1, 1912.	2 00	Sept. 1....	Sept. 1, 1912.
	".....	Aug. 1, 1912.	10 00	Aug. 1....	Aug. 1, 1912.
	".....	Oct. 1, 1912.	2,197 50	Oct. 1....	Oct. 1, 1912.
	".....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
27,300 sq. ft.....	5 years renewable.....	Oct. 1, 1912.	2,184 00.....	April 1.... Oct. 1	April 1, 1912.
	During pleasure.....	April 1, 1912.	50 00	April 1....	April 1, 1912.
	12 yrs. and 2 mths....	Sept. 1, 1912.	60 00	Sept. 1....	Sept. 1, 1912.

4 GEORGE V., A. 1914

## WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19832	1913 Jan. 4	The Grand Trunk Railway Company of Canada.....	Priv. to lay cable for transmission of 30 h.p. of electric power from Mill Street power station to Lessee's swing bridge, east of the Wellington Street Bridge.....
19836	1912 Dec. 26	The N. K. Fairbank Company, Limited....	Priv. to lay and maintain an 8" service pipe to draw water from Canal to Lessee's works at Cote St. Paul, and a 12" pipe to draw water for fire protection.....
19911	1913 Jan. 30	The Dominion Gresham Guarantee and Casualty Company.....	Priv. to lay and maintain a 1" iron pipe across Canal land on north bank of Canal.....
19912	Feb. 10	Dominion Flour Mills, Limited.....	Land on north bank of Canal at south east corner of new Basin at St. Henry; also priv. to erect and maintain a conveyor, spout and wire.....
19936	Mar. 5	Canadian Carbonate Company, Limited....	Priv. to lay and maintain an 8" water pipe across Canal lands from Canal to Lessee's works on Cad. Lots Nos. 3523 and 3524, Par. of Montreal, Que., and draw water.....
19944	" 4	Dominion Mahogany & Veneer Company, Limited.....	Priv. to lay and maintain an 8" pipe from Canal to Lessee's works on Cad. Lot No. 1005 of Parish of Lachine, and draw water.....
19949	" 14	Canadian Car and Foundry Company, Limited.....	Priv. to lay, maintain and operate a single track line of railway on north bank of canal.....
19950	" 20	The Bell Telephone Co. of Canada, Limited....	Priv. to lay and maintain nine 3½ inch conduit pipes across Canal lands and across Canal west of Napoleon Street Bridge, Montreal.....

## BEAUHARNOIS

19433	1912 April 12	Pascal Mercier.....	Land, part of lot No. 531 of Town of Valleyfield, Que.....
†19569	June 29	Joseph Lalonde.....	Land between King's Highway and River St. Lawrence, pt. of Lot No. 160 of Official Plan and Book of Reference for Par. of Ste. Cecile, Co. of Beauharnois, Que.....

## CHAMBLY

19913	1913 Jan. 30	The Montreal and Southern Counties Ry. Co.	Priv. to erect and maintain 2 sets of poles on Canal land to carry a trolley wire for electric railway line crossing Canal at Chambly Canton.....
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† Supercedes Lease No. 15418, dated April 20, 1904.

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
	During pleasure.....	July 19, 1912.	225 00	July 19...	July 19, 1912.
	" .....	Oct. 1, 1912.	463 32	Oct. 1....	Oct. 1, 1912.
	" .....	Jan. 1, 1913.	1 00	Jan. 1....	Jan. 1, 1913.
1,660 sq. ft. ....	" .....	Feb. 1, 1913.	66 00	Feb. 1....	Feb. 1, 1913.
	" .....	Mar. 1, 1913.	360 00	Mar. 1....	Mar. 1, 1913.
	" .....	May 1, 1913.	360 00	May 1....	May 1, 1913.
	21 years.....	Mar. 1, 1913.	50 00	Mar. 1...	Mar. 1, 1913.
	During pleasure.....	" 1, 1913.	50 00	" 1....	" 1, 1913.

## CANAL.

0.8 arp.....	During pleasure.....	Oct. 1, 1911.	1 00	Oct. 1....	Oct. 1, 1911.
8 arp., 25 per.....	" .....	April 1, 1912.	4 00	April 1....	April 1, 1912.

## CANAL.

	During pleasure.....	Nov. 1, 1912.	5 00	Nov. 1....	Nov. 1, 1912.
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4 GEORGE V., A. 1914

WATER POWER and other Public Property leased by the Department of  
CHATS FALLS

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19670	1912 Oct. 3	The Canadian Northern Ontario Railway Co.	Land, part of Lot No. 29, Range 1, Tp. of Bristol, Co. of Pontiac, Que.....

## GALOPS

19633	1912 Sept. 5	M. F. Beach.....	Priv. to erect and maintain an electric transmission line on Canal lands in Village of Iroquois, Ont., on Iroquois section of Canal.....
19666	Oct. 3	The Bell Telephone Co. of Canada, Limited...	Priv. to lay and maintain a telephone cable under Canal at point 406 feet west of Swing Bridge over Lock No. 25 at Iroquois, and to erect and maintain 2 poles.....
**19711	Nov. 2	George Robinson.....	Land and land covered with water on north side of King's highway on west half of Lot No. 30 in 1st Concession of the Township of Matilda, Co. of Dundas, Ont.....

## MURRAY

19673	Oct. 3	W. W. Porte.....	Priv. to erect and maintain a telephone line across Canal and Canal lands at Brighton Road Bridge.....
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## RIDEAU

19436	1912 April 12	The Ottawa Gas Company.....	Priv. to lay and maintain a 12" gas main across Canal lands and under Canal west of Bronson Avenue Swing Bridge, in the City of Ottawa, Ont.....
19467	May 3	Ottawa Terminals Ry. Co.....	Priv. to lay a tile pipe from point between Chateau Laurier and Dufferin Bridge to Canal.....
h19469	June 1	W. W. Walker.....	Land, part of Lot No. 17 in the 7th Con. of the Tp. of North Elmsley, Ont.....
i19583	" 28	Trustees of "The Ottawa Motor Boat Association.....	Land covered with water on south side of Canal, opposite Exhibition Grounds, near Bank Street Bridge, Ottawa, Ont.
j19597	July 20	W. J. Henry.....	Land covered with water, part of Lot "K," Concession "C," Tp. of Nepean, Co. of Carleton, Ont.....
k19901	Jan. 30	W. H. Sturgeon.....	Part of Lot No. 1 in the 5th Con. of Tp. of South Crosby, in the County of Leeds, Ont.....
l19914	Jan. 30	William J. Henry.....	Land on east bank of Canal in Lot "K," Concession "C," Tp. of Nepean County of Carleton, Ont.....
19932	Mar. 1	The Ottawa Gas Co....	Priv. to lay and maintain a 24" gas main across Canal lands and under Canal in vicinity of Hawthorne Street, Ottawa, Ont..

\*\* Cancels and supersedes Lease No. 17933, dated Sept. 1, 1909.

h Assigned to Jas. V. Watson by No. 19722.

i Assigned to The Ottawa Motor Boat Club, Ltd., by No. 20018.

j Cancelled, surrendered and superseded by No. 19914.

k Supersedes No. 18877, dated Dec. 21, 1910.

l Cancels, surrenders and supersedes Lease No. 19537, dated July 20, 1912.

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

## CANAL.

Area.	Term.	Commence- ment to term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
0.46 acre.....	21 years renewable....	Oct. 1, 1912.	1 00	Oct. 1....	Oct. 1, 1912.

## CANAL.

.....	During pleasure.....	Aug. 1, 1912.	2 00	Aug. 1....	Aug. 1, 1912.
.....	" .....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
1,342 acre.....	" .....	Mar. 1, 1912.	1 00	Mar. 1....	Mar. 1, 1912.

## CANAL.

.....	During pleasure.....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912.
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## CANAL.

.....	During pleasure.....	April 1, 1912.	1 00	April 1....	April 1, 1912.
.....	" .....	Oct. 1, 1911.	1 00	Oct. 1....	Oct. 1, 1911.
0.6 acre.....	" .....	May 1, 1912.	5 00	May 1....	May 1, 1912.
2.37 acre.....	" .....	" 1, 1912.	1 00	" 1....	" 1, 1912.
0.63 acre.....	" .....	July 1, 1912.	50 00	July 1....	July 1, 1912.
1.6 acre.....	" .....	Jan. 1, 1913.	7 50	Jan. 1....	Jan. 1, 1913.
1.3 acre.....	" .....	" 1, 1913.	15 00	" 1....	" 1, 1913.
.....	" .....	Feb. 1, 1913.	1 00	Feb. 1....	Feb. 1, 1913.

4 GEORGE V., A. 1914

## WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19951	Mar. 20	T. A. Kidd.....	Land and land covered with water on south side of Canal Cut at Burritt's Rapids Lock Station, being part of Lot 5 in the 1st Concession, Co. of Grenville, Ont.....

## SAULT STE.

n19607	1912 Aug. 2	The Algoma Central and Hudson Bay Railway Company.....	Portions of St. Mary's Island and adjacent waters, in Town of Sault Ste. Marie, Algoma District, Ont.....
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## TRENT

o19437	April 9	George E. Laidlaw.....	Land, parts of Lots Nos. 1, 2, 3, 4, and 5, parts of Lot lettered "C" and parts of Block known as Govt. Reserve, south of Portage Road, Tp. of Bexley, Co. of Victoria, Ont.....
19438	April 9	The Canadian Pacific Railway Company....	Priv. to erect and maintain a telegraph line over Canal on lot No. 6, Con. "B," Tp. of Thorah, Co. of Ontario, Ont.....
19617	Aug. 7	E. H. Mann and Company.....	Land, pt. of Lot No. 1 in the 12th Concession of the Tp. of Douro, Co. of Peterborough, Ont. ....
p19619	" 7	John McPherson.....	Land in 3rd and 4th Concession of Township of Eldon, Co. of Victoria, Ont.....
19823	Nov. 26	The Scymour Power and Electric Co., Ltd.....	Priv. to erect and maintain a transmission line across Trent River in Campbellford, Ont.....
19946	1913 Mar. 14	The Campbellford, Lake Ontario and Western Railway Company....	Priv. to construct and maintain a high level bridge over Trent River in Town of Trenton, Ontario, and of operating a line of railway thereon.....
19961	Mar. 29	Crushed Stone, Limited	Land, part of the east half of Lot No. 1 and the west half of Lot No. 1 in the 8th Con. of the Tp. of Carden, Co. of Victoria, Ont.; and privilege to take stone piled thereon.....

## WELLAND

q19477	1912 May 1	The Buffalo Union Furnace Company.....	Land and Land covered with water on east side of Canal Basin in Port Colborne, being parts Lots Nos. 26 and 27 in 1st Con. of Tp. of Humberstone, Co. of Welland.....
19498	June 1	Milo Gillap.....	Land on north side of Canal Feeder between Tamarack and Oak Streets, in Dunnville, Ont.; being part of Lot No. 3 in 1st Range, Tp. of Moulton, Co. of Haldimand.....
19584	" 28	The Queen City Oil Co., Ltd.....	Land, part of Lot No. 12 in 6th Con. of the Tp. of Grantham, Co. of Lincoln, Ont.; and privilege to lay and maintain 3 pipe lines from Canal to said parcel of land.....

n Cancels and supersedes Lease No. 14879, dated March 29th, 1902.

o Cancels and supersedes Lease No. 18363, dated April 25th, 1910.

p Cancels and supersedes Lease No. 18404 granted to Peter McPherson, dated May 30th, 1910.

q Supersedes Leases Nos. 15220, 15222, 15223, 15224, 15225, 15226 and 15587.

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
1,332 sq. ft.....	During pleasure.....	April 1, 1913.	5 00	April 1....	April 1, 1913.

## MARIE CANAL.

17.94 acre.....	21 years.....	April 1, 1912.	400 00	April 1....	April 1, 1912

## CANAL.

16.88 acres.					
40.6 acres.....	During pleasure.....	Mar. 1, 1912.	28 50	Mar. 1....	Mar. 1, 1912.
.....	".....	Jan. 1, 1912.	1 00	Jan. 1....	Jan. 1, 1912.
1.4 acres.....	".....	Mar. 1, 1912.	25 00	Mar. 1....	Mar. 1, 1912.
26.66 acres.	".....	Mar. 15, 1912.	39 89	Mar. 15....	Mar. 15, 1912.
13.23 acres.....	".....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
.....	".....	Nov. 1, 1912.	1 00	Nov. 1....	Nov. 1, 1912.
.....	21 years renewable....	Jan. 1, 1913.	10 00	Jan. 1....	Jan. 1, 1913.
2.415 acres.....	During pleasure.....	Mar. 1, 1913.	30 00	Mar. 1....	Mar. 1, 1913.

## CANAL.

5.00 acres.....	21 years renewable....	May 1, 1912.	2,689 80	May 1....	May 1, 1912.
55.47 acre.....					
0.06 acres.....	During pleasure.....	" 1, 1912.	10 00	" 1....	" 1, 1912.
1.9 acres.....	".....	April 1, 1912.	25 00	April 1....	April 1, 1912.

4 GEORGE V., A. 1914

## WATER POWER and other Public Property leased by the Department of

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19618	Aug. 20	The Grand Trunk Railway Company of Canada.....	Land, part of Lot No. 27 in 1st Con. of Tp. of Humberstone, Co. of Welland, Ont., now in Village of Port Colborne....
19658	Sept. 25	City of St. Catharines..	Land and priv. to construct concrete arch bridge over old canal in St. Catharines.....
19672	" 25	The Ontario Power Co. of Niagara Falls.....	Priv. to erect and maintain an electric transmission line along east and south sides of Old Canal, from Lock No. 4 to vicinity of Lock No. 2, St. Catharines, Ont.....
19679	" 25	The Ontario Power Co. of Niagara Falls.....	Priv. to lay and maintain a 3" intake pipe across Canal lands and draw water from Canal, and lay and maintain a return pipe, at Port Colborne, Ont.....
19695	Oct. 19	The Dunnville Consolidated Telephone Company, Ltd.....	Priv. to erect 2 telephone lines, one on each side of Feeder from Junction to line between Tps. of Moulton and Wainfleet; also to lay submarine cable across Feeder at Stromness Station...
19698	Oct. 26	The Maple Leaf Rubber Company, Limited...	Land between Old and New Canals, near Lock No. 1, and being part of Lot No. 21 in 1st Con. of the Tp. of Grantham, Co. of Lincoln, Ont.....
19710	Nov. 2	The Steel and Radiation, Limited.....	Priv. to lay and maintain a 4" water pipe across Canal land at St. Catharines, Ont.; and draw 25,000 gal. of water per day..
19719	" 11	The Niagara, St. Catharines and Toronto Railway Company....	Priv. to lay and maintain rails upon Bridge over Canal at Niagara Street crossing at St. Catharines, Ont.; for purposes of electric line of railway.....
19821	Dec. 20	Township of Crowland.	Priv. to lay and maintain a 12" Sewer Pipe on Canal lands in Tp. of Crowland, and to connect same with Government sewer along east side of Canal.....
19822	" 20	E. H. McNulty.....	Land in Village of Port Dalhousie, being part of Lot No. 21 in 1st Con. of Tp. of Grantham, Co. of Lincoln, Ont.....
19907	1913 Feb. 6	Village of Port Colborne	Land, parts of Lot No. 27 in the 1st Con. of the Tp. of Humberstone, County of Welland, Ont.....
19916	" 17	The Ontario Power Company of Niagara Falls	Priv. to erect and maintain a transmission line over railway spur to the Government elevator at Port Colborne, Ont...

## SESSIONAL PAPER No. 20

Railways and Canals during the Fiscal Year ended March 31, 1913—*Continued.*

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
14.33 acres.....	21 years renewable....	Feb. 1, 1912.	475 20	Feb. 1....	Feb. 1, 1912.
0.09 acre.....	21 years.....	Sept. 1, 1912.	1 00	Sept. 1....	Sept. 1, 1912
.....	During pleasure.....	July 1, 1912.	200 00	July 1....	July 1, 1912.
.....	".....	Aug. 1, 1912.	20 00	Aug. 1....	Aug. 1, 1912.
.....	".....	July 1, 1911.	25 00	July 1....	July 1, 1911.
0.38 acre.....	8 yrs. and 9 mths. re- newable.....	Aug. 1, 1912.	30 00	Aug. 1....	Aug. 1, 1912.
.....	During pleasure.....	Sept. 1, 1912.	100 00	Sept. 1....	Sept. 1, 1912.
.....	".....	Jan. 1, 1913.	300 00	Jan. 1....	Jan. 1, 1913.
.....	".....	Oct. 1, 1912.	5 00	Oct. 1....	Oct. 1, 1912.
0.06 acre.....	".....	Dec. 1, 1912.	10 00	Dec. 1....	Dec. 1, 1912.
1.70 } acre.....	".....	Jan. 1, 1913.	1 00	Jan. 1....	Jan. 1, 1913.
0.11 }	".....	Feb. 1, 1913.	1 00	Feb. 1....	Feb. 1, 1913 .

H. F. ALWARD,  
*Departmental Solicitor.*

4 GEORGE V., A. 1914

PROPERTY leased to the Department of Railways and Canals by  
INTERCOLONIAL

No. of Lease.	Date of Signature.	Lessee.	Lands or rights demised.
19621	1912 Aug. 7	J. P. Fairbanks.....	Space for ticket office and division freight office, in Nos. 107, 109 and 144 Hollis Street, Halifax, N.S.....
19712	" 29	The Western Union Telegraph Company.....	All rooms of ground floor of building known as No. 3, and 2 rooms and toilet of 2nd floor of building known as No. 5 King Street, St. John, N.B.....

## TRENT

19637	Sept. 5	The Hamilton Bridge Works Co., Ltd.....	Land in City of Hamilton, Ont.....
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## QUEBEC

19439	April 12	William Massey Birks et al.....	Of Rooms Nos. 301, 302, 303, 304, 305, 306 and 307 in building known as "New Birks Building," on Phillips Square, Montreal
19523	" 18	St. Lawrence Bridge Company, Limited..	Land, part of Cad. Lot No. 915 in Par. of Lachine Co. of Jacques Cartier.....

## QUEBEC

19440	April 9	William Massey Birks et al.....	Rooms Nos. 708, 709, 710, 711 and 713 in building known as "New Birks Building," on Phillips Square, Montreal.....
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## SESSIONAL PAPER No. 20

various parties during the Fiscal Year ended March 31, 1913.

## RAILWAY.

Area.	Term.	Commence- ment of term.	TERMS OF PAYMENT.		
			Annual rental.	Due each year.	First install- ment due.
			\$		
.....	5 years renewable.....	May 1, 1912.	2,500 00	Quarterly...	May 1, 1912.
.....	5 years.....	" 1, 1912.	1,000 00	" .....	" 1, 1912.

## CANAL.

5,000 sq. ft.....	Until expiry of con- tract No. 19144.....	Sept. 5, 1912.	1 00	Sept. 5....	Sept. 5, 1912.
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## CANALS.

.....	3 years.....	May 1, 1912.	2,500 00	Quarterly...	May 1, 1912.
700,400 sq. ft.....	Until metal work un- der contract No. 19007 is delivered...	Mar. 1, 1912.	1 00	for whole period of occupancy	Mar. 1, 1912.

## BRIDGE.

.....	3 years.....	May 1, 1912.	1,800 00	Quarterly...	May 1, 1912.
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H. F. ALWARD,

*Departmental Solicitor.*

4 GEORGE V., A. 1914

PROPERTY conveyed to the Department of Railways and  
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
1912.			
†19527	Feb. 12.	James D. Ross.....	Land at.....
†19532	Feb. 15.	W. Medford Christie <i>et al.</i>	Land at.....
1911.			
†19534	Dec. 23.	Estate of Wm. Rhodes	Land in St. Lawrence Ward.....
†19562	May 8.	Jacob Y. Mersereau <i>et ux.</i>	Land at White Rapid Brook, 5½ miles east of Blackville.....
†19625	Nov. 10.	Margaret Matheson...	Land at.....
1912.			
19627	July 11.	Sarah J. C. Kelly.....	Land at North Sydney, Lot No. 240.....
19628	May 9.	Patrick Dwyer.....	Land on east side of Campbell Road.....
19697	July 4.	Joseph J. Johnson <i>et ux</i>	Land in.....
19720	April 11.	Emran C. Steeves <i>et ux</i>	Land under toe of abutment wing of St. George Street over-head bridge, and damages.
1911.			
†19735	Feb. 1.	James A. McDonald..	Parcel of land in Campbellton, N.B., granted under lease of April 30, 1909, between George Duncan and James A. McDonald, for the term of 999 years from June 16, 1892.
1912.			
†19736	Jan. 23.	"	Parcel of land in Campbellton, N.B., granted under lease of June 16, 1892, between George Duncan and James A. McDonald, for the term of 999 years from June 16, 1892.
†19737	Jan. 22.	Peter M. Shannon.....	Parcel of land in Campbellton, N.B., granted under lease of Aug. 1, 1895, from Jno. and Mary A. Adams to Peter Roy, for term of 999 years from Aug. 1, 1895.
†19738	Feb. 1.	Elizabeth Nickerson..	Parcel of land in Campbellton, N.B., granted under lease of April 20, 1877, between Elizabeth J. Adams and Robert J. Gordon, for the term of 999 years from Oct. 20, 1877.
*19739	May 13.	Pacifique D. Breau <i>et ux.</i>	Land on west side of Butler Street.
*19740	May 14.	Moncton Land Co. Ltd.	Land at.....
1909.			
†19741	Feb. 19.	Andrew Loggie <i>et al.</i> ..	Land at.....
1911.			
†19742	March 25.	Annie Cooke <i>et al.</i> ....	"
†19743	Dec. 1.	Robert Maddison <i>et ux</i>	Land at.....
1912.			
†19744	Jan. 2.	William Richards & Co., Ltd.	"
†19745	Jan. 22.	John Adams <i>et al.</i> ....	"
†19746	Jan. 24.	Jane C. Duncan.....	"
†19747	Jan. 25.	William F. Ferguson..	Parcel of land in Campbellton, N.B., granted under a lease from George Duncan on July 6, 1889, for 99 years.
†19748	Feb. 14.	City of Halifax.....	Land in.....
†19749	Feb. 19.	Francis A. Ronnan <i>et al.</i>	"
19750	April 29.	Frederick M. Tennant <i>et al.</i>	"
19751	May 8.	Isaac Creighton <i>et ux.</i>	Land on east side of Campbell Road.....
19752	May 8.	Abigail Hunt.....	" " "
19753	May 8.	Emma F. Knowlan <i>et al.</i>	" " "

## SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.

## RAILWAY

District.	County.	Area.	Amount.
			\$
Truro.....	Colchester, N.S.....	0.369 acre.....	1,006 58
".....	".....	0.332 acre.....	2,013 16
Levis.....	Levis, Que.....	1,783 sq. ft.....	713 20
			Principal
			178 30
Blackville.....	Northumberland, N.B.....	0.80 acre.....	80 00
			Interest
North Sydney.....	Cape Breton, N.S.....	1,300 sq. ft.....	100 00
Sydney.....	".....	2 acres.....	412 49
Halifax.....	Halifax, N.S.....	4,785 sq. ft.....	2,322 40
Truro.....	Colchester, N.S.....	855 sq. ft.....	1 00
Moncton.....	Westmorland.....	1 sq. ft.....	730 00
Campbellton.....	Restigouche.....		1 00
".....	".....		2,000 00
".....	".....		1,100 00
".....	".....		4,000 00
Moncton.....	Westmorland.....	825 sq. ft.....	200 00
".....	".....	{ 1.02 } acres.....	30,677 55
		{ 10.36 }	
Dalhousie.....	Restigouche, N.B.....	2,079 sq. ft.....	Exchange of land
Painsec Junction.....	Westmorland, N.B.....	0.53 acre.....	53 00
Moncton.....	".....	420 sq. ft.....	232 50
Campbellton.....	Restigouche, N.B.....	{ 9.50 } acres.....	25,000 00
".....	".....	{ 7.70 }	
		{ 12,282 } sq. ft.....	594 00
".....	".....	{ 7,280 }	
".....	".....	1.62 acre.....	6,300 00
".....	".....		1,100 00
Halifax.....	Halifax, N.S.....	1.208 acres.....	483 20
Sackville.....	".....	0.22 acres.....	220 00
Moncton.....	Westmorland, N.B.....	0.928 acre.....	275 77
Halifax.....	Halifax, N.S.....	{ 10,320 } sq. ft.....	3,547 40
".....	".....	{ 7,657 }	
".....	".....	4,734 sq. ft.....	535 94
".....	".....	12,521 sq. ft.....	3,777 08

4 GEORGE V., A. 1914

PROPERTY conveyed to the Department of Railways and  
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
1912.			
19754	May 9.	John McKinnon <i>et ux.</i>	Land on east side of Campbell Road.
19755	May 9.	Richard Shea <i>et ux.</i>	"
19756	May 25.	Ellen Flanagan	Land on east side of Charlotte Street.
19757	June 7.	Lucinda Taylor <i>et al.</i>	Land at Painsec Junction.
19758	July 3.	Herbert A. Johnson <i>et al.</i>	Land at.
19759	July 4.	Mary Jane Johnson and husband.	"
19760	July 26.	Mariner Blakney <i>et ux.</i>	Land at Sunny Brae.
19761	Aug. 7.	A. Duncan Thomas <i>et ux.</i>	Land on west side of George Street.
19762	Aug. 5.	Bertram E. Smith <i>et al.</i>	Land at.
19763	Aug. 22.	Albert J. Trevors <i>et ux.</i>	"
17965	Nov. 2.	Minnie Russel <i>et mar.</i>	Land on west side of George Street.
1910.			
†19766	Dec. 21.	George J. Sproul <i>et ux.</i>	Land at.
1911.			
†19767	March 23.	William Fenton	"
1912.			
19768	Aug. 22.	William McLaughlin	"
1911.			
†19769	May 11.	The Riverside Cemetery Co.	"
1912.			
†19770	April 29.	Barbara A. Mowat	Parcel of land in Campbellton, N.B., granted under lease of Aug. 22, 1889, between George Duncan and Cassimere Gallant, for the term of 99 years from Aug. 22, 1889.
†19771	Jan. 24.	Alphonse C. Belle Isle	Parcel of land in Campbellton, granted under lease of Aug. 1, 1895, between John and Mary A. Adams and Peter Roy, for term of 999 years from Aug. 1, 1895.
19793	May 30.	William A. Black <i>et ux.</i>	Land on north east side of I. C. R.
1911.			
†19839	Nov. 8.	Cyrus E. Pugsley <i>et ux.</i>	Land $\frac{3}{4}$ of a mile east of
†19840	Nov. 18.	Clarence A. McCabe	Land $\frac{1}{4}$ of a mile east of
1912.			
†19841	Feb. 12.	David Pugsley	Land $\frac{1}{4}$ of a mile east of
19885	Nov. 25.	Alexander Dewar <i>et ux.</i>	Land at Bear Brook Siding 1 mile east of
19889	Nov. 18.	Silas Williams <i>et ux.</i>	Land on south side of the south west branch of Miramichi River.
19918	April 3.	Miramichi Pulp and Paper Co.	Land at.
19924	Dec. 5.	Marcellin Beauchene <i>et ux.</i>	Land, part of Cad. Lot No. 159.
1913.			
**19928	Jan. 16.	Dept. of Marine and Fisheries.	Exchange of land; the Dept. of Railways and Canals obtaining 2 parcels 5,255 sq. ft. and 583 sq. ft. for one parcel 24,044 sq. ft.
1911.			
†19969	Dec. 30.	Joseph Theberge (Rev)	Land at.
1912.			
19970	Aug. 27.	Thomas H. Perley	"
1911.			
†19971	March 13.	Thomas Murphy <i>et ux.</i>	"

## SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.—*Continued.*RAILWAY—*Continued.*

District.	County.	Area.	Amount.
			\$
Halifax.....	Halifax, N.S.	5,108 sq. ft.	2,347 91
".....	"	5,543 sq. ft.	2,271 35
Fredericton.....	York, N.B.	9,400 sq. ft.	4,600 00
Moncton.....	Westmorland, N.B.	1,100 sq. ft.	20 00
Truro.....	Colchester, N.B.	1,680 sq. ft.	1 00
".....	"	1,095 sq. ft.	1 00
Moncton.....	Westmorland, N.B.	564 sq. ft.	110 00
Fredericton.....	York, N.B.	1,932 sq. ft.	3,000 00
Moncton.....	Westmorland, N.B.	6,175 sq. ft.	461 70
Chatham.....	Northumberland, N.B.	1,836 sq. ft.	1 00
Fredericton.....	York, N.B.	1,932 sq. ft.	400 00
Chatham.....	Northumberland, N.B.	0.64 acre.	253 12
".....	"	2.06 acres.	612 50
".....	"	2,340 sq. ft.	883 33
".....	"	$\left. \begin{array}{l} 4,580 \\ 4,750 \end{array} \right\}$ sq. ft.	1,170 42
Campbellton.....	Restigouche, N.B.		2,700 00
".....	"		1,500 00
Amherst.....	Cumberland, N.S.	2.15 acres.	430 00
Maccan.....	"	0.27 acre.	40 50
".....	"	0.64 acre.	96 00
".....	"	0.87 acre.	108 75
Barneys River Station.....	Pictou, N.S.	0.4 acre.	50 00
Cushman's.....	Northumberland, N.B.	3,900 sq. ft. 1.1 acre.	110 91
Chatham.....	"	$\left\{ \begin{array}{l} 13,744 \\ 2,288 \end{array} \right\}$ sq. ft.	302 50
St. Fabien.....	Rimouski, Que.	0.17 acre.	60 00
Chatham.....	Northumberland, N.B.	11 sq. ft.	10 08
".....	"	$\left\{ \begin{array}{l} 1.06 \\ 2.95 \end{array} \right\}$ acre.	455 86
".....	"	10,512 sq. ft.	1,008 33

4 GEORGE V., A. 1914

PROPERTY conveyed to the Department of Railways and  
INTERCOLONIAL

Number of Deed.	Date of Deed.	Grantor.	Lot.
	1913.		
19972	Jan. 6.	Philip H. Loggie <i>et ux</i>	Land in Loggieville.....
	1912.		
20076	Sept. 24.	William McDonald....	Land at.....
	1913.		
20077	March 28.	Peleg Demmens <i>et al.</i>	Land near.....
	1912.		
20078	Nov. 30.	Peter Prendergast <i>et ux</i>	Land on east side of Campbell Road....
20079	Oct. 3.	Thomas Flynn.....	" " " " " " " " " " " "
	1911.		
†20080	June 28.	Wm. B. Walsh <i>et ux</i> ...	Lot No. 41.....
	1912.		
20081	Dec. 24.	Helen McLaggan.....	Lots Nos. 43 and 43A....
	1913.		
20084	Feb. 11.	Charles Lecomte.....	Part of Cad. Lot No. 197....
	1912.		
20205	July 20.	Albert Fownes.....	Land at.....
20206	July 20.	Charles Waugh <i>et ux</i> ..	" .....
20207	Aug. 15.	Gwendolyn Crofton...	" .....
20208	Aug. 15.	John W. Stephens <i>et ux</i>	" .....
20209	Aug. 21.	Sam. Geo. Thorne <i>et ux</i> .	" .....
20210	Aug. 21.	Nova Scotia Steel and Coal Co., Ltd., <i>et al</i>	" .....
*20211	Oct. 7.	Geo. E. Fisher <i>et ux</i> ...	Parcel of land No. 44...
*20212	Oct. 8.	Wm. Wilkinson.....	Land being Lot 31.....
*20213	Dec. 18.	Andrew Loggie <i>et al.</i> ...	Land being Lot 87.....
	1913.		
20214	March 6.	Miramichi Lumber Co.	Land at.....
	1911.		
†20233	Feb. 13.	Fred. M. Tweedie <i>et ux</i> .	" .....

## PRINCE EDWARD

19624	1912. May 16	Charles R. Smallwood <i>et al</i> , Trustees of Estate of Lady Louisa A. Wood.	Parts of lots Nos. 60 and 61 in the 3rd Hundred and Lots Nos. 11, 12 and 13 in the 4th Hundred.
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## SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.—*Continued.*RAILWAY—*Continued.*

District.	County.	Area.	Amount.
			\$ cts.
	Northumberland, N.B.	2.6 acres	2,535 38
Hopewell	Pictou, N.S.	0.235 acre	300 00
Newport Station	Hants, N.S.	8,750 sq. ft.	175 00
Halifax	Halifax, N.S.	4,930 sq. ft.	2,200 00
"	"	10,233 sq. ft.	3,033 66
Chatham	Northumberland, N.B.	4.7 acres	529 16
"	"	{0.15} acre. {1.16}	400 00 and interest
St. Valier	Bellechasse, Que.	798 sq. ft.	250 00
Sydney Mines	Cape Breton, N.S.	5,500 sq. ft.	300 00
"	"	0.33 acre	1,000 00
"	"	4,500 sq. ft.	
"	"	12,700 sq. ft.	697 50
"	"	4,300 sq. ft.	232 50
"	"	0.02 acre	103 33
"	"	11.373 acres	6,757 60
Chatham	Northumberland, N.B.	3.90 acres	1,815 00 with interest = \$2,173.80, \$175.00 be- ing costs.
"	"	2.99 acres	522 50 with interest = \$712, \$130.00 being costs.
"	"	94,681 sq. ft.	27,500 and in- terest, \$400 being costs.
"	"	{27,800} {24,800} sq. ft	2,700 00 and interest
"	"	{4,542}	
"	"	21,212 sq. ft.	17,196 88

## ISLAND RAILWAY

Charlottetown	Queens, P.E.I.	25,880 sq. ft.	600 00
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4 GEORGE V., A. 1914

PROPERTY conveyed to the Department of Railways and  
FARRAN'S POINT

Number of Deed.	Date of Deed.	Grantor.	Lot.
	1912.		
19791	Sept. 11	John A. Sheets.....	Part of Lot No. 16.....
19792	Sept. 11	Robert Sheets.....	Part of Lot No. 15.....

## RIDEAU

19728	1912. Aug. 5.	Jos. H. Webster <i>et ux.</i>	Dwelling house and outbuildings erected on Canal lands at..
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## TRENT

†19731	1911. March 16.	Thos. Robinson <i>et ux.</i>	The West half of Part of Lot No. 25 in 10th Con. of the Township of.
	1912.		
†19732	Jan. 16.	Richard P. Grills <i>et ux.</i>	Part of Lot No. 9 in Con. 3, Township of.....
†19733	Jan. 16.	Thos. H. Rowe <i>et ux.</i>	Part of North half of Lot No. 15, in 11th Con. of the Township of Seymour.
†19734	Jan. 23.	Charles Nicholas Jr., <i>et ux.</i>	Part of North half of Lot No. 16 in 10th Con. of the Township of Seymour.
	1913.		
19919	Jan. 31.	The York Construction Co., Ltd.	Part of Lot No. 107 in 1st Con. of Township of.....
19920	Jan. 31.	Thomas McAvoy <i>et ux.</i>	Part of Lot No. 22 in South Block of West side of Front St., in
	1912.		
19915	June 19.	Maria Donahue <i>et al.</i>	Lot No. 10 on South side of Bridge Street.....
	1913.		
19973	March 8.	Frank J. Farley <i>et ux.</i>	Parts of Leas Island in River Trent, Part of Lot No. 3 in Con. 1, and parts of Lots Nos. 3 and 4, in Con. 2.
19974	Feb. 20.	Milo A. Hawley.....	Lot "Y" and part of Lot "E," North side of Tice or Bridge Street; and half interest in a certain brick wall.
	1912.		
†20086	Feb. 15.	John Horsman <i>et ux.</i>	Parts of Lots Nos. 8 and 41 in Block XI on Inkerman and Balaclava Streets.
	1913.		
20087	Feb. 13.	Ellie Todd <i>et al.</i> .....	Part of Lot No. 20 in South Block on west side of Front St.
20138	Feb. 19.	Daniel G. Clark.....	Part of North half of Lot No. 15 in the 11th Con. of Township of Seymour.
20216	March 13.	Patrick Cowan and Alice Cowan.	Part of North half of Lots Nos. 15 and 16, Con. XI.....
20217	March 28.	Patrick Cowan and Alice Cowan.	Part of Lot No. 17 in 10th Con. Township of Seymour.....
20218	March 31.	Rev. Geo. F. Whibbs and Jane O'Byrne.	Part of Lot No. 17 in 10th Con. and parts of North half of Lots Nos. 15 and 16 in 11th Con.

## WELLAND

†*19246	1911. Sept. 11.	Dept. of Marine and Fisheries.	Part of Lot "1A" of subdivision of Lot No. 28, Con. 1.....
	1912.		
19842	Dec. 9.	Alice E. Dickinson....	Land covered with water pts. of water lots in front of Sand Lot, in front of strip fronting Lots 1, 2 and 3 in front of Lots 4, 5 and 6 on Shore of Lake Erie.

†Too late for last year's Report.

‡Assignment of Lease.

\*Judgment of the Exchequer Court.

\*\*Order in Council.

## SESSIONAL PAPER No. 20

Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

## CANAL.

District.	County.	Area.	Amount.
Farran's Point.....	Stormont, Ont.....	0.019 acre.....	\$ cts. 17 82
".....	".....	0.013 acre.....	12 18

## CANAL.

Nicholsons Locks.....	Grenville, Ont.....		500 00
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## CANAL.

Eldon.....	Victoria, Ont.....	3.40 acres.....	3 00 and 2.75 acres of Canal lands.
Seymour.....	Northumberland, Ont.....	21.9 acres.....	1,100 00
".....	".....	0.47 acres.....	30 00
".....	".....	1.6 acre.....	25 00
East Gwillimbury.....	York, Ont.....		125 00
Campbellford.....	Northumberland, Ont.....	0.20 acre.....	450 00
Frankford.....	Hastings, Ont.....	0.2 acre.....	25 00
Murray.....	Hastings, Ont.....	(4.10) acres.....	1 00 and
Campbellford.....	Northumberland, Ont.....	(3.74) 0.08 acre.....	exchange of land 1,800 00
".....	".....	0.23 acre.....	150 00
".....	".....	0.23 acre.....	350 00
Seymour.....	".....	5.5 acres.....	165 00
".....	".....	3.08 acres.....	111 00
".....	".....	3.70 acres.....	130 00
".....	".....	(3.70) acres.....	1 00
		(3.08)	

## CANAL.

Humberstone.....	Port Colborne, Ont.....	0.525 acres.....	
Port Colborne.....	Welland, Ont.....	5.51 acres.....	7,687 03

H. F. ALWARD,  
*Departmental Solicitor.*

LETTERS PATENT issued by the Department of Railways and Canals during the Fiscal Year ended March 31, 1913.  
INTERCOLONIAL RAILWAY.

No.	Date.	Grantee.	Description.	Area.	Amount.	Remarks.
1959	1913. Jan. 7.	Atlantic Sugar Refining Co., Ltd.	Deed of land in City of St. John, N.B.	6.94 acres.	\$ cts. 100,000 00	
CHAMBLY CANAL.						
19613	1912. Aug. 15.	Madame Alphonsine Leblanc (wife of Hormidas Riendeau)	Deed of land being portion of Lot 130, Village of Chambly Basin, Que.	2,800 sq. ft.		
LACHINE CANAL.						
19550	1912. June 5.	The City of Montreal.	Deed of part of Cad. Lot. No. 3414, on West side of the Cote St. Paul Road, Parish of Montreal, Que.	18,871 sq. ft.	9,435 50	
WELLAND CANAL.						
†19248	1911. Sept. 1.	City of St. Catharines	Deed of part of Lot 13, Con. 6, Township of Grantham, County of Lincoln, Ont.	13.55 acres.	1,016 25	

†Too late for last year's Report.

H. F. ALWARD,  
*Departmental Solicitor.*

## SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1913.

No. of Release.	Date of Release.	Grantor.	Description.	Amount.
	1912.			\$ cts.
19547	May 30..	The Halifax and Eastern Ry. Co. The Dominion of Canada Trust Corporation, Ltd.	Indemnifying and saving harmless His Majesty from all claims which Company might have re making surveys for or constructing a line of railway from Dartmouth east.	85,000 00
19556	May 31..	Benjamin Tucker, guardian of the children of late Joseph Cuthbertson.	Claim owing to the death of Joseph Cuthbertson.	1,000 00
19557	June 4..	Rebecca McDonald.....	Of all claims, etc., owing to the death of her husband, Alex. J. McDonald.	1,000 00
19559	May 20..	Hopper Brothers.....	From all claims for damages to machinery in Excelsior Factory caused by raising of water in Leper Brook through ice jam caused by railway piers.	200 00
19576	July 9..	Oscar Savary.....	Damages to Oscar Savary from injuries sustained while in employ of railway at Carmel, Que.	500 00
19626	July 10..	Eva Bellavance.....	From all claims owing to death of Absolom Lavoie.	1,000 00
†19772	Feb. 16..	Edith May Stevens <i>et al</i>	Damages consequent upon expropriation of a certain building erected on a lot on south side of Water Street, Campbellton, N.B.	400 00
	1913.			
19938	March 5..	Emily Grenier.....	For all claims, etc., owing to death of her husband, Xavier Letellier.	1,000 00
	1912.			
20094	Dec. 30..	Alice McDevitt <i>et al</i> ....	For damages to property on north side of St. George Street, City of Moncton, N.B., consequent upon construction of St. George Street Overhead bridge.	400 00
	1913.			
20139	Jan. 17..	Hugh H. Reid.....	From and against all claims and demands on account of injuries sustained "Derby Junction Accident."	500 00
20140	Jan. 30..	Johanna Tobin.....	" " "	1,500 00
20141	Jan. 30..	Christopher O'Brien....	" " "	3,000 00
	1912.			
20142	Dec. 17..	Joseph D. Armstrong...	" " "	2,050 75
	1913.			
20143	Jan. 24..	William Irving.....	" " "	1,000 00
20144	Feb. 3..	Wesley D. Curtis.....	" " "	1,500 00
20145	Feb. 19..	Charles McDougall, Administrator of estate of Harvey McDougall....	" " "	1,500 00
20146	Jan. 30..	Jane Clouston.....	" " "	1,500 00
	1912.			
20147	Dec. 20..	Harry W. Steen.....	" " "	350 00
	1913.			
20148	Feb. 19..	Katherine J. Harris, Administratrix estate of Willard Harris.	From and against all claims and demands, etc., incidental to injuries sustained by late Willard Harris, "Derby Junction Accident."	3,000 00
20149	Feb. 19..	James Pleadwell, Administrator of estate of late Sadie Pleadwell.	From and against all claims and demands, etc., incidental to injuries sustained by late Sadie Pleadwell, "Derby Junction Accident."	3,000 00
RIDEAU CANAL.				
†20092	1911. Aug. 13..	Ottawa Northern and Western Railway Co. and The Canadian Pacific Railway Co.	Of all right, title, etc., in certain parcel of Canal reserve (262 sq. ft.) leased by Letters Patent No. 13624, dated Aug. 28th, 1899.	1 00

†Too late for last year's report.

4 GEORGE V., A. 1914

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

## TRENT CANAL.

No. of Release.	Date. of Release.	Grantor.	Description.	Amount.
	1912.			\$ cts.
19521	May 6.	Frederick Pluard, <i>et al.</i>	For damages by water to Lot No. 15 in the 9th Con. of the Tp. of Harvey, Co. of Peterborough, Ont.	176 00
19537	April 5.	Township of Harvey	For damages by water to certain highways and public roads and ways in Township of Harvey, Co. of Peterborough, Ont.	950 00
†19543	1911. Sept. 5.	Jno. E. Curtis, <i>et ux.</i>	Damages to south west corner of Lot No. 6, Con. 3, Tp. of Alnwick, Co. of Northumberland, Ont.	160 00
19723	1912. Nov. 20.	The Corporation of the County of Hastings.	From all claims, etc., arising out of or incidental to the removal of the old bridge or the construction of the new bridge or any other work at the point in question near Frankford, Ont.	20,000 00
19773	Oct. 14.	John Scott	For damages consequent upon injury to a horse.	50 00
19774	Oct. 14.	Samuel Adams		35 00
†19775	1911. Oct. 16.	Matilda E. M. Gainer	For damages by water to the south half of Lot No. 1, in 9th Con. of the Tp. of Hope, County of Durham, Ont.	70 00
†19776	Feb. 13.	Mossom B. Bonnell, <i>et al.</i>	For damages by water to part of Block "D" in Village of Bobcaygeon, Co. of Victoria, Ont.	200 00
19777	1912. June 22.	Sidney Garrett, <i>et al.</i>	For damages by water to the west half of Lot No. 26, 1st Con. of the Tp. of Douro, Co. of Peterborough, Ont.	250 00
†19778	1911. Nov. 13.	Andrew G. Shearer, <i>et al.</i>	For damages by water to Lot No. 8 in 4th Con. and Lot No. 9 in 5th Con. of the Tp. of Harvey, Co. of Peterborough, Ont.	336 00
19779	1912. Oct. 12.	James Tindle, <i>et ux.</i>	For damages by water to the west half of Lot No. 7, Con. 5th, Tp. of Smith, Co. of Peterborough, Ont.	50 00
†19780	1911. Feb. 10.	John J. Lundy	For damages by water to Lot No. 3 in the 4th Con. of the Tp. of Smith, Co. of Peterborough, Ont.	153 00
†19781	Dec. 15.	Township of Smith	For damages by water to certain highways, roadways, streets and approach to a certain bridge in the Tp. of Smith, in the County of Peterborough, Ont.	1,500 00
†19782	Dec. 6.	Thomas Harris and Edwin Harris.	For damages by water to Cow Island in Rice Lake Tp. of South Monaghan, Co. of Northumberland, Ont.	75 00
†19783	April 22.	Janet McCracken	For damages by water to the west half of Lot No. 21, Con. 7, Tp. of Alnwick, Co. of Northumberland, Ont.	30 00
†19784	July 12.	Alfred Braithwaite, <i>et ux.</i>	For damages by water to the west half of Lot No. 11 and to the east half of the S. 9-10 of the south half of Lot No. 10 in the 3rd Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	96 00
†19785	Sept. 6.	George Ferguson, <i>et al.</i>	For damages by water to Margaret's Island in Rice Lake, Tp. of Alnwick, Co. of Northumberland, Ont.	100 00
†19786	1912. Feb. 12.	William White	For damages by water to parts of Lots 32 and 33 in the 9th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	25 00
†19787	1910. Sept. 21.	Francis Cheyne	For damages by water to Lots 10 and 11 in 9th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	250 00
†19788	Aug. 26.	Thomas B. Chalk	For damages by water to Lot No. 35 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	120 00
†19789	1912. Feb. 21.	Mary White and Harriet White.	For damages by water to the east part of Lot No. 7 and Lots Nos. 8, 9 and 10, Block "M," Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00

## SESSIONAL PAPER No. 20

DAMAGES released to the Department of Railways and Canals during the Fiscal Year ended March 31, 1913.—*Continued.*

No. of Release.	Date of Release.	Grantor.	Description.	Amount.
	1911.			\$    cts.
†19886	Oct. 14.	Charles G. Thomson, <i>et ux.</i>	For damages by water to Lot No. 2 in Block "A," Tp. of Otonabee, Co. of Peterborough, Ont.	120 00
19887	April 28.	Frank Cadigan.....	For damages by water to north east quarter of Lot No. 5 in the 10th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	1 00
19888	Dec. 7.	Albert E. Bottum <i>et ux.</i>	For damages by water to Island No. 2, Pigeon Lake, Tp. of Harvey, Co. of Peterborough, Ont.	200 00
19902	Dec. 14.	Mary Louisa Shannahan <i>et al.</i>	For damages by water to the south half of the north east quarter of Lot No. 5 in the 9th Con. of the Tp. of Ennismore, Co. of Peterborough, Ont.	80 00
19921	Jan. 24.	William H. Grylls, <i>et ux.</i>	For damages by water to part of Lot No. 49, north of Portage Road, 9th Con., Tp. of Eldon, Co. of Victoria, Ont.	175 00
19922	Jan. 24.	Gabriel Switzer, <i>et ux.</i> ...	For damages by water to the north part of the west half of Lot No. 22 in the 4th Con. of the Tp. of Emily, Co. of Victoria, Ont.	20 00
19923	Jan. 24.	Albert Boynton.....	For damages by water to the west half of Lot No. 21 and to the south west quarter of Lot No. 22, in the 8th Con. of the Tp. of Eldon, Co. of Victoria, Ont.	600 00
†19975	Aug. 22.	Joseph Braithwaite, <i>et ux.</i>	For damages by water to the east half of Lot No. 11 in the 3rd Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	80 00
19976	July 21.	William Y. Field.....	For damages by water to part of Lots 5 and 6 in the 4th Con. of the Tp. of Alnwick, Co. of Northumberland, Ont.	75 00
19977	Nov. 13.	George C. Biggar, <i>et al.</i> (executors of estate of late Emily S. Shoenberger).	For damages by water to Spook, or Ghost Island, Rice Lake, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00
†19978	Oct. 19.	Caroline C. Ruttan.....	For damages by water to parts of north half of Lot No. 34 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	70 00
†19979	Feb. 12.	John Michie, <i>et ux.</i> .....	For damages by water to Lots 5 and 6 in Block "I," of Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	50 00
†19980	July 5.	Hilda Stewart.....	For damages by water to the east part of Margaret's Island, Rice Lake, Tp. of Alnwick, Co. of Northumberland, Ont.	100 00
†19981	Sept. 19.	Catherine S. Ainlay and Joseph Ainlay.	For damages by water to the south west corner of the north half of Lot No. 34 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	60 00
†19982	Mar. 30.	Francis C. Richard, <i>et ux.</i>	For damages by water to part of Lot No. 4, Block "B," Village of Bewdley, Tp. of Hamilton, Co. of Northumberland, Ont.	40 00
†19983	Nov. 30.	John D. Hayden, <i>et ux.</i> ...	For damages by water to Hickory, or Balsam Island, in Rice Lake, opposite Tp. of Alnwick, Co. of Northumberland, Ont.	300 00
20096	Feb. 4.	Ellis B. Burrell, <i>et al.</i> ...	For damages consequent upon removal of a barn situated on Lot No. 60, Block "F," Queen Street, Campbellford, Ont.	175 00
20097	Mar. 17.	Stephen H. Thorne, <i>et ux.</i>	For damages by water to Little Fothergill Island, in Pigeon Lake, Tp. of Ennismore, Co. of Peterborough, Ont.	200 00
†20113	Feb. 12.	Agnes Sidney.....	For damages by water to part of Lot No. 33 in the 8th Con. of the Tp. of Hamilton, Co. of Northumberland, Ont.	50 00

†Too late for last year's Report.

H. F. ALWARD,  
*Departmental Solicitor.*



## PART III

REPORTS OF THE GOVERNMENT RAILWAYS MANAGING  
BOARD AND OTHER OFFICIALS

FOR THE YEAR 1912-13

Government Railways Managing Board.

Report of Chief Engineer, I.C.R.

- " Engineer of Maintenance, I.C.R.
- " Superintendent of Motive Power, I.C.R.
- " Comptroller and Treasurer, I.C.R.
- " Statement of Casualties, I.C.R.
- " Comptroller and Treasurer, Windsor Branch.
- " Engineer of Maintenance, Windsor Branch.
- " Chief Engineer, P.E.I. Ry.
- " Superintendent, P.E.I. Ry.
- " Master Mechanic, P.E.I. Ry.
- " Accountant and Auditor, P.E.I. Ry.
- " Statement of Casualties, P.E.I. Ry.
- " Chairman and Secretary of Government Railways Provident Fund.



## OFFICE OF GENERAL MANAGER OF GOVERNMENT RAILWAYS,

MONCTON, N.B., September 12, 1913.

Hon. FRANK COCHRANE,  
Minister of Railways and Canals.  
Ottawa.

SIR,—The Government Railways Managing Board have the honour to submit the following report on the working of the Government Railways during the fiscal year ended March 31, 1913:—

The board was constituted as follows:

Mr. A. W. Campbell, C.E., chairman, Ottawa.  
Mr. D. Pottinger, I.S.O., assistant chairman, Moncton.  
Mr. E. Tiffin, general traffic manager, Moncton.  
Mr. F. P. Brady, general superintendent, Moncton.  
Mr. J. B. T. Caron, general solicitor, Moncton.

The railways under the control of the board are: The Intercolonial railway, the Windsor Branch railway, and the Prince Edward Island railway.

Separate accounts are kept for each of these railways, and they will be considered separately in this report.

## INTERCOLONIAL RAILWAY.

Effective November 1, 1912, a change was made in the organization. The office of Chief Engineer was abolished, and the district superintendents were given charge of all works on their respective districts. The position of right-of-way and lease agent was created.

Reports from officials are enclosed as follows:—

From Right-of-Way and Lease Agent for Chief Engineer, from the first of the year to October 31, 1912, on works charged to capital account.

The report of the Engineer of Maintenance on the repair and renewal of the permanent way buildings and works up to October 31, 1912.

Reports from Superintendents D. McDonald, E. Price, J. T. Hallisey and Y. C. Campbell, on works done on capital, and on repairs and renewals of permanent way buildings and work, from November 1, 1912, to the end of the year.

Report of the Superintendent of Motive Power, and of the Mechanical Department's Accountant, with the statements relating to the Mechanical Department.

Also the general accounts of the railway prepared by the Comptroller, as follows:—

1. Capital account.
2. Revenue account.
3. Maintenance of way and structures.
4. Maintenance of equipment.
5. Traffic expenses.
6. Transportation expenses.
7. General Expenses.
8. General stores account.
9. General balance.

10. Statement of receipts and expenses.
11. Equipment renewal account.
12. Rail renewal account.
13. Fire renewal account.
14. Statement of cash received.
15. Statement of averages.
- Return of casualties.

The length of railway in operation during the year 1912-13 was 1,468.15 miles.

#### CAPITAL ACCOUNT.

The cost of the road and equipment on March 31, 1912, was \$94,745,819.64. The additions during the year were as follows:—

Additions to and furnishings for office building at Moncton.. . . . .	\$ 36,424 89
Additional facilities at Princess pier.. . . . .	122 20
Docks and wharfs at Halifax.. . . . .	351,385 06
Diversion of line at Chatham and branch to wharf..	114,927 21
General protection of highways.. . . . .	8,588 58
Increase in accommodation at Halifax.. . . . .	123,245 43
Increase accommodation at Campbellton.. . . . .	126,290 77
Increase accommodation at Truro.. . . . .	146,721 48
Increase accommodation at Stellarton.. . . . .	9,000 00
Increased accommodation and facilities along the line.. . . . .	68,700 03
Increase accommodation at Fredericton.. . . . .	15,582 40
Increase accommodation at Ste. Flavie.. . . . .	26,386 81
Increase accommodation at St. John.. . . . .	34,774 71
Increase accommodation at Rivière du Loup.. . . .	5,713 16
Improve triple valves of air brakes.. . . . .	7,149 93
Improvements at Loggieville (Exchequer Court award).. . . . .	2,535 38
Improvements at Hampton.. . . . .	4,028 03
Improvements at Sussex.. . . . .	95 65
Improvements at Point Tupper.. . . . .	93,000 00
Improvements at Mulgrave.. . . . .	7,724 74
Locomotive and car shops with equipment and new freight yard and cut-off line at Moncton . . . . .	18,764 99
New machinery of steamer <i>Scotia</i> .. . . . .	1,104 00
Original construction.. . . . .	206 10
Pay claim of E. A. Wallberg for work done on the Intercolonial railway under government contracts, \$45,219.50, with interest at 5 per cent from February 1, 1913, to March 31, 1913, \$359.28..	45,578 78
Pay the estate of the late Hon. W. T. Pipes, \$305.20, with interest at 5 per cent from October 6, 1905, to March 31, 1913, \$114.18, being for land taken for right-of-way to wharf at Fort Lawrence.. . .	419 38
Pay the Halifax and Eastern Railway Company for plans, surveys, field notes, etc., taken by the government.. . . . .	85,000 00
Rolling stock.. . . . .	400,000 00
Safety appliances for equipment.. . . . .	7,984 27

## SESSIONAL PAPER No. 20

Surveys and inspection.. . . . .	\$ 32,997 23
Spur line to Wallace harbour.. . . . .	967 82
Sydney Mines diversion.. . . . .	128,197 32
Strengthen bridges.. . . . .	50,299 94
Towards the construction of a railway from a point on the Intercolonial railway at or near Dart- mouth, in the county of Halifax, <i>via</i> Musquodoboit harbour and the valley of the Musquodoboit to Deans settlement in the said county.. . . .	539,791 24
	<hr/>
	\$97,239,527 17

Less—

To previous years' expenditure—proceeds of sale of dwelling house and shed, Moncton, and transfer of bridge, Moncton, to improvements at Mul- grave.. . . . .	\$1,720 00
To amount received for concessions (ballast wharf property, St. John, granted per terms of order in council of October 22, 1912).. . . .	\$100,000 00

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\$101,720 00

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Making the total cost on March 31, 1913.. . . . \$97,137,807 17

Explanations in regard to the expenditure on capital account will be found in the reports of the Right-of-Way and Lease Agent, the Superintendent of Motive Power, and the District Superintendents.

## REVENUE ACCOUNT.

The gross earnings and the working expenses for the year compare as follows:—

Gross earnings.. . . . .	\$11,984,482 69
Working expenses.. . . . .	11,984,482 69

---

Net earnings.. . . . . Nil.

There was a gain of \$777,863.74 from the operation of the railways for the year. This surplus was transferred in March to equipment renewal account, so that when the books were closed at the end of the year the net earnings showed nil.

The gross earnings compare as follows with those of the previous year:—

In 1912-13.. . . . .	\$11,984,482 69
In 1911-12.. . . . .	10,593,785 84

---

Increase.. . . . . \$ 1,390,696 85

The earnings from passenger traffic compare as follows:—

In 1912-13.. . . . .	\$ 3,483,447 32
In 1911-12.. . . . .	3,017,304 63

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Increase.. . . . . \$ 466,142 69

The earnings from freight traffic compare as follows:—

In 1912-13 .. . . . .	\$8,028,760 13
In 1911-12 .. . . . .	7,008,300 49

---

Increase .. . . . . \$1,020,459 64

4 GEORGE V., A. 1914

The earnings from mails, express freight and miscellaneous compare as follows:—

In 1912-13 . . . . .	\$ 517,275 24
In 1911-12 . . . . .	568,180 72
Decrease . . . . .	\$ 50,905 48

The earnings by mile of railway compare as follows:—

In 1912-13 . . . . .	\$ 8,162 98
In 1911-12 . . . . .	7,215 74
Increase . . . . .	\$ 947 24

The earnings by train mile compare as follows:—

In 1912-13 . . . . .	\$ 1 47
In 1911-12 . . . . .	1 43

The number of passengers carried compare as follows:—

In 1912-13 . . . . .	\$ 3,763,115
In 1911-12 . . . . .	3,416,553
Increase . . . . .	\$ 346,562

There was an increase of 321,489 in the number of local passengers, and of 25,073 in the number of through passengers.

The weight of revenue producing freight compares as follows:—

	Tons.
In 1912-13 . . . . .	5,203,468
In 1911-12 . . . . .	4,536,599
Increase . . . . .	666,870

There was an increase in local freight of 460,884 tons, and also an increase in through freight of 205,986 tons.

A number of statements which give detailed information in regard to the traffic are appended to this report. They are as follows:—

Statement of receipts, showing the receipts monthly from passenger traffic, freight traffic, and mails and sundries.

Passenger statement, showing monthly the number of local and of through passengers carried and the mileage.

Freight statement, showing monthly the number of tons of local and through freight carried, and the mileage.

Comparative statement, showing the principal articles of freight carried during this year and the preceding year.

Descriptive statement of freight transported showing a few of the principal articles.

Statement of coal transported showing the stations from which it was sent.

Statement showing the quantity of raw and of refined sugar, of fresh and salted fish, of grain for export, and of European freight carried over the railway.

Statements of the ocean-borne passenger business at Halifax, at St. John and at Quebec, showing the number of passengers received by the Railway from each of the steamers named.

Statements of ocean-borne freight traffic at Halifax and at St. John, showing the quantity of freight imported and exported by the lines of steamers named and carried over the railway.

## SESSIONAL PAPER No. 20

## WORKING EXPENSES.

The working expenses compare as follows with the previous year:—

In 1912-13 . . . . .	\$11,984,482 69
In 1911-12 . . . . .	10,591,035 84
Increase . . . . .	\$ 1,393,446 85

The averages compare with those of last year as follows:—

Per mile run by engines:—

In 1912-13 . . . . .	1.1658
In 1911-12 . . . . .	1.1248

Per mile run by trains:—

In 1912-13 . . . . .	1.47
In 1911-12 . . . . .	1.43

Working expenses per mile of railway:—

In 1912-13 . . . . .	\$ 8,159 91
In 1911-12 . . . . .	7,213 86

The Engineer of Maintenance reports that the road was never in better condition. During the year 623,058 ordinary ties and 273 sets of switch ties were put in. 160 miles of track was ballasted.

5.75 miles of additional sidings were provided at various points.

Bridges, culverts, wharfs and buildings received necessary repairs.

The fences were repaired and 45.58 miles of fences were built.

The snow fences and snow sheds were repaired.

The Superintendent of Motive Power in his report deals with the rolling stock purchased, rebuilt in shops, etc.

## STORES.

The value of stores purchased was . . . . . \$4,164,646 10

The value of stores used was . . . . . 4,349,486 76

The value of material sold was . . . . . 368,831 88

The value of stores on hand at the end of the year was—

Miscellaneous . . . . . 592,209 31

Fuel . . . . . 140,045 69

Roadway and bridge material . . . . . 732,902 78

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\$1,465,157 78

## WINDSOR BRANCH RAILWAY.

The line extends from Windsor Junction to Windsor, N.S., and is 32 miles in length. It is under lease to the Dominion Atlantic Railway Company, which operates the line, and which has also running powers over the Intercolonial Railway between Windsor Junction and Halifax.

The Windsor Branch is maintained by the Government, and the company pays the Government one-third of the gross earnings.

The following statement of the accounts prepared by the Comptroller is enclosed:

No. 1—Revenue account.

No. 2—Maintenance of way and structures.

No. 3—General Balance.

No. 4—Statement of earnings.

4 GEORGE V., A. 1914

Also the report of the Engineer of Maintenance on the work done during the year, and on the condition of the Branch;

The revenue ( $\frac{1}{2}$ earnings) was . . . . .	\$ 68,246 70
The cost of maintenance was . . . . .	29,970 62

Net earnings . . . . .	\$ 38,276 08
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The earnings decreased and compare with those of the previous year as follows:—

Earnings 1912-13 . . . . .	\$ 68,246 70
Earnings 1911-12 . . . . .	73,176 60

Decrease . . . . .	\$ 4,929 90
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There was an increase in passenger traffic, while the mail earnings remained stationary. There was a decrease in freight traffic.

The Engineer of Maintenance reports that the track, bridges, and structures have been kept in good repair.

### PRINCE EDWARD ISLAND RAILWAY.

The length of railway in operation during the year 1911-12 was 267.5 miles. In November, 1912, the branch line from Harmony to Elmira was completed and road opened for traffic. The length of this branch is 9.9 miles, making the total mileage at the end of the year 1912-13 in operation 277.4 miles. The gauge is 3' 6".

Enclosed is the report of the Superintendent, who sends statements of the various accounts prepared by the Accountant and Auditor, also the report of the Mechanical Superintendent and the statements in regard to that Department, also the return of casualties which occurred during the year:—

The cost of road and equipment on March 31, 1912 was.	\$8,687,727 38
The expenditure during the year 1912-13 was . . . . .	103,001 03

Making the total cost on March 31, 1913 . . . . .	\$8,790,728 41
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The report of the Superintendent gives the details and explanations in regard to capital expenditure:—

Gross earnings . . . . .	\$ 389,474 07
The working expenses for the year were . . . . .	489,972 34

Deficiency . . . . .	\$ 100,498 27
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The gross earnings compare with the previous year as follows:—

In 1912-13 . . . . .	\$ 389,474 07
In 1911-12 . . . . .	367,203 39

Increase . . . . .	\$ 22,270 68
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The increase was in both passenger and freight traffic.

The working expenses compare with the previous year as follows:—

In 1912-13 . . . . .	\$ 489,972 34
In 1911-12 . . . . .	449,962 91

Increase . . . . .	\$ 40,009 43
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The necessary work was done to maintain the permanent way and works, and rolling stock, and they are in a state of efficiency.

## SESSIONAL PAPER No. 20

INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS  
EMPLOYEES' PROVIDENT FUND.

The report of the fund, which has been separately furnished, shows Credit Balance on March 31, 1912..\$	309,234 71
During the fiscal year the contributions of the employees amounted to .. . . . .	85,365 23
The contributions of the Railways amounted to.. . .	85,365 23
Amounts received for refunds.. . . . .	2,146 00
A total of.. . . . .	\$ 482,111 17
The total expenditure was .. . . . .	145,432 80
Leaving a balance of .. . . . .	\$ 336,678 37
To which is to be added the interest .. . . . .	9,350 20
Making a total amount to the credit of the fund on March 31, 1913 .. . . . .	\$ 346,028 57

During the year sixty-three employees were retired and placed upon the fund, and thirty-six have died, leaving four hundred and fourteen persons on the list receiving an allowance from the fund at the end of the fiscal year. This is an increase of twenty-seven persons compared with last year.

I have the honour to be, sir,

Your obedient servant,

A. W. CAMPBELL, *Chairman.*

F. P. BRADY, Esq.,  
General Superintendent,  
MONCTON, N.B.

MONCTON, N.B., July 3, 1913.

SIR,—I have the honour to submit the following report on Capital Account Expenditure for part of the fiscal year 1912-13:—

*Sydney Mines diversion—*

The contract work for the diversion was completed, except sidings and road crossings.

Some ballasting was done by contract, but not all completed.

The following persons were paid for land required for the right of way:—

Lots 52, 60, 63, 63B, 64, 69 and 71 Nova Scotia Steel & Coal Co.

40—Chas. Jessome.

60—S. G. Thorne.

63A—Malcolm McMillan.

65A—Mrs. G. Crofton.

65B—J. W. Stevens.

67A—Wm. Daly.

67B—Albert Fownes.

68—Chas. Waugh.

70—Mrs. M. McArthur.

Contracts were let for combined station, dwelling and freight shed at Little Bras d'Or and Florence.

Loading platforms built at Florence and Little Bras d'Or.

Oil, coal and tool houses built at Florence.

A flag station was started at Watson's Cove, being built by day labour.

*Improvements at Point Tupper—*

A contract was let for a 75 ft. turntable and table delivered.

A contract was let for a 10-stall addition to the engine house which was completed.

Plans and specifications prepared and contract let for a brick station, which was about 30 per cent completed.

Plans and specifications prepared for a two apartment dwelling, tenders asked, contract let and work started.

*Improvements at Mulgrave—*

Installation of heating plant in new station completed.

Material ordered for concrete platforms and received.

Platforms completed; work done by day labour.

Concrete foundations for overhead bridge completed, work done by day labour.

*To increased accommodation at Stellarton—*

Plans and specifications prepared and contract let for an addition to freight shed, which was completed and taken off the contractor's hands.

*Spur line to Wallace Harbour—*

Survey made, plans and specifications prepared and submitted for approval.

*To increased accommodation at Truro—*

Plans and specifications prepared for a brick freight house, contract let and work finished and taken off contractor's hands.

Portion of old station moved to new site to allow room for new building.

Plans and specifications were prepared for a new stone station, the contract let, and work started. About 30 per cent completed.

*To increased accommodation at Halifax—*

Plans and specification prepared and work started on the extension of Pier No. 7 at Richmond. Wharf extension about 90 per cent completed, and preparations made for starting rock excavation for filling.

In connection with the new terminal proposition a survey of the railway property from Deep Water Terminus to Rockingham was made and plans prepared and submitted.

*Improvements at Hampton—*

Preliminary plans and estimates were prepared for a new brick passenger station.

*Improvements at Sussex—*

Preliminary plans and estimates were prepared for a new brick passenger station.

*Locomotive and Car Shops at Moncton—*

Plans and specifications were prepared and tenders asked for an addition to the existing freight car repair shop. Tenders were asked for a brick building with mill construction wood roof. On 20th September the Chairman gave instructions to prepare plans for a concrete building with concrete roof, which were completed and submitted for approval.

*Addition to and Furnishing for Office Building at Moncton—*

The addition to the building was completed and taken off the contractor's hands and occupied by the Railway Department.

## SESSIONAL PAPER No. 20

*To increase accommodation at Fredericton—*

The concrete platforms at the new station were completed; work done by day labour.

*Diversion of line at Chatham and branch to wharf—*

Material required for freight sheds at Chatham and Nelson was delivered and the work done by day labour.

Plans and specifications for new stations at Nelson and Chatham were prepared, tenders asked, contracts let and the buildings completed.

Examination and report made on ballast pit at Cushman's re ballasting for diversion.

The ballasting and lifting of track on the new line was completed. Work done by day labour.

Three sidings were put in on the new line.

*To increase accommodation at Campbellton—*

The concrete platforms at new station were completed. Work done by day labour.

*To increase accommodation at Ste. Flavie—*

Preliminary plans and estimates were prepared for a new station. Contract let for new station and construction commenced. About 25 per cent completed.

*To increase accommodation at Rivière du Loup—*

Plans prepared for a Trainmen's rest house and the work of construction commenced.

*Surveys and inspection—*

A survey was made for improving the alignment of the main line between one mile east of Little Metis and one mile east of St. Octave station, a distance of about three miles.

A survey was made for a proposed spur line to the brick works on the west side of Pugwash harbour.

A survey was made for a proposed new track from the main line near the engine house to Courtney bay at St. John, to avoid shunting across the city streets. Plans, profiles and estimates made and submitted.

Surveys made for water supplies at Matapedia, Causapsca and Assametquaghan.

*To increase accommodation and facilities along the line—*

Plans and specifications prepared, contract let and completed for an addition to the freight shed at Sydney Mines.

Plans and specifications prepared, contract let and work about half completed on addition to freight shed at Sydney.

Plans and specifications prepared and contract let for new station at Sayabec, construction started, and completed. Station master's dwelling completed. Freight shed repaired, painted and removed to new site.

*To strengthen bridges—*

Under this appropriation there were fifty-three short spans put in on the first division, 36 between the lengths of 8 and 12 feet, 12 between the lengths of 12 and 15 feet, and 5 between the lengths of 15 and 20 feet.

On the second division there were a total of ten short spans put in, 9 between the lengths of 8 and 12 feet, and one 17½ feet.

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*Elmira Branch, P.E.I.—*

The Contractors completed their work in connection with the branch line. The ballasting and track lifting was done by the Railway Department.

I have the honour to be, sir,  
Your obedient servant,

WM. B. MACKENZIE,  
*Chief Engineer.*

LEVIS, Que., May 8, 1913.

F. P. BRADY, Esq.,  
General Superintendent,  
Moncton, N.B.

DEAR SIR,—I herewith submit report of work done on my Division, from the 1st November, 1912, to the 31st of March, 1913.

## TRACK.

During this period, 79,084 lineal feet of 5-in., 4 $\frac{3}{4}$ -in., 4 $\frac{1}{2}$ -in and 4 $\frac{1}{4}$ -in. rails were taken up and replaced with an equal quantity of 5-in., 4 $\frac{3}{4}$ -in. and 4 $\frac{1}{2}$ -in.

## TIES.

During this period, 2,433 ordinary ties and 6 sets of switch were put in track.

## SWITCHES AND SEMAPHORES.

A new semaphore was placed at Tobin's, and semaphores were required at the following places:—LaDurantaye, L'Islet, Harlaka, St. Eloi, St. Pacôme, Cacouna, Ste. Luce, St. Anaet and Carrier.

Glasses of all semaphores changed on North No. 5 division, and also all semaphores inspected and adjusted on the above division.

## STATION TELEGRAPH, SIGNALS.

These were put in at LaDurantaye and Bagot.

## SNOW FENCES.

Five hundred and eighty-three rods of snow fences were erected at Blake and 500 rods of portable fences at St. Alexandre.

## WHARFS AND TRESTLES.

The trestle at Tobin's repaired and Princess pier at Levis repaired.

## BUILDINGS AND PLATFORMS.

Repaired at the following places:—

- Sectionman's shanty, Rimouski.
- Pumphouse at St. Fabien, rebuilt.
- St. Simon station.
- Tobin's new freight shed completed.
- Building new sectionmen's shanty at Tobin's.
- Rivière-du-Loup roundhouse.
- Rivière-du-Loup old machine shop.
- Rivière-du-Loup new machine shop.

## SESSIONAL PAPER No. 20

Subway at Ste. Flavie.  
Coal shed, St. Luce.  
Platform, St. Anaclet.  
Coal shed, Rimouski.  
Station platform, St. Alexandre.  
Station platform, St. Andre.  
Station platform, Ste. Helene.  
Turntable, Ste. Flavie.  
Roundhouse, Ste. Flavie.  
Station, Rimouski.  
Bie station.  
Trois Pistoles station.  
St. Eloi station.  
Tobin's station.  
Station platform, Isle Verte.  
Station, Rivière-du-Loup.  
Baggage room Rivière-du-Loup.  
Mechanical store, Rivière-du-Loup.  
Old Lake road station.  
St. Paschal station.  
St. Arsene station.  
Cacouma station.  
Cattle pen at Rimouski.  
Telegraph office, Rivière du Loup.  
Chief despatcher's office, Rivière du Loup.  
St. Andre station.  
St. Philippe station.  
Dessaint station.  
St. Alexandre station.  
Turntable at Ste. Flavie.  
Agent's house at Laurier.  
Laurier station.  
Sectionmen's house at DeLotbinière.  
St. Apollinaire station.  
Scale house, Ste. Rosalie.  
Station platform, Bagot.  
Lumber shed at Drummondville.  
Mail crane at Manseau.  
Mail crane at Levergne.  
Doors, Daveluyville station.  
Doors, Lemieux station.  
Freight shed at Drummondville.  
Windows, Carmel station.  
Freight shed doors, St. Germain.  
Freight shed doors, Laurier.  
Freight shed doors, St. Leonard.  
Flanger No. 22.  
Mail catcher, DeLotbinière.  
Doors, Aston Junction station.  
Doors, Drummondville station.  
Doors and windows, Bagot station.  
Doors and windows, St. Cyrille station.  
Platform and freight shed at Mitchell.  
Doors, Ste. Rosalie station.

Doors, St. Leonard station.  
Doors, St. Cyrille station.  
Windows, St. Leonard station.  
Roof of stable at Ste. Monique.  
And making lorry frames.  
LaDurantaye station.  
Ste. Louise station.  
Agent's house, Ste. Anne.  
Agent's house, St. Charles Junction.  
And moving cattle pen at Ste. Anne.  
And moving cattle pen at L'Islet.  
Roof and freight shed, Levis.  
Agent's house, Rivière Ouelle.  
Baggage room and coal shed, Rivière Ouelle.  
Gangway and cattle pen, Rivière Ouelle.  
Rivière Ouelle wharf station.  
St. Joseph station.  
Scale in Levis baggage room.  
Giroux's house, Chaudière curve, railway house.  
Station platform, Chaudière Curve.  
Freight shed, Levis.  
Agent's house, Chaudière Junction.  
W.C. at L'Islet.  
Brick walls, engine house, Chaudière Junction.  
Hot air pipe, engine house, Chaudière Junction.  
Drain for ash pit house, Chaudière Junction.  
Pit, St. Charles water crane.  
Pit, L'Islet water crane.  
Freight checker's office, Levis.  
Smoke stacks, engine house, Chaudière Junction.  
Railway house, occupied by A. B. Therrien, Chapman's property.  
Doors of engine house, Chaudière Junction.  
Doors of transfer shed, Chaudière Junction.  
Apartments agent's house, Chaudière Curve.  
Chaudière Curve station.  
Crossing gates at Levis.  
Superintendent's house, Levis.  
Levis station.  
L'Islet station.  
Freight shed, St. Romuald.  
Floor and doors in baggage room at Levis.  
Floor of Levis freight shed.  
Ste. Anne station.  
Terminal buildings, Chaudière Junction.  
Flanger No. 4251.  
Building office for Dominion Express Co., at Rivière du Loup.  
Building porch for agent's house, DeLotbinière.  
Making drain box at Ste. Rosalie.  
Moving car house at St. Apollinaire.  
Building pantry at St. Apollinaire.  
Building waiting room in shelter at St. Edward.  
Building car house at Ste. Rosalie.  
Making storm doors for sectionmen's house, Aston Junction.  
Making desk for St. Romuald station.  
Making lory frames at Drummondville.

## SESSIONAL PAPER No. 20

- Making coal bin, St. Apollinaire station.
- Making sink stand at DeLotbinière station.
- Making electric semaphore heads.
- Making signal ladders at Drummondville.
- Extension to station platform at L'Islet.
- Putting in new spouts, station and baggage room, Levis.
- Extension to platform, Letellier station.
- Extension to platform, St. Pacôme, and putting railing at the present one.
- Building office for accounting branch in Levis station.
- Repairs to telegraph board at Levis.
- Improvements in resident engineer's office.
- Grading to make a team track alongside loading platform at L'Islet.
- Building new cattle pen at Levis.
- Laying sidewalk in subway, Chaudière Junction yard.
- Renewing doors of Harlaka station.
- Changing sink and drain pipe in Carrier station.
- Jacking up floor in Levis station.
- Making office for Dominion Express Co. in baggage room at Levis.
- Varnishing stove pipes at St. Charles Junction, St. Romuald, St. Joseph and Carrier.
- Putting in iron beams to support engine house, Chaudière Junction.
- Extension to loading platform at Ste. Anne.
- Making cupboard and letter box in baggage room at Levis for the resident engineer.
- Making cupboard in accountant's office.
- Making new push cars and repairing old ones and hand cars.
- Excavating and blasting to lay new sidings for new cattle pen, Levis.
- Changing and repairing water pipes in agent's house, Levis.
- Laying water and drain pipes for new stock pen at Levis.
- Making whistle posts.
- Making semaphore boards.
- Making sign boards.
- Making chock blocks.
- Making siding sign boards.
- Applying materials and painting the following buildings as per contract as follows:—
- Chaudière station.
- Chaudière Junction station.
- Chaudière Junction rest house.
- Levis station, exterior.
- Levis station, umbrella sheds.
- Levis freight house.
- Harlaka station.
- St. Charles Junction station.
- St. Jean, Port Joli station.
- Ste. Louise station.
- Ste. Anne station.
- New culvert underneath road at L'Isle Verte.
- Repairs to culvert,  $\frac{1}{4}$  mile west of St. Charles Junction.
- Repairs to culvert, 1 mile east of Carrier.
- Repairs to culvert,  $\frac{1}{2}$  mile east of Carrier.
- Repairs to pier and west abutment of Etchemin bridge just east of St. Romuald station, reinforcing abutment with concrete.
- Repairs to culvert, 3 miles east of Montmagny.

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Repairs to culvert,  $\frac{1}{2}$  mile east of Montmagny.

Lifting Trois Saumon Bridge.

Raising bridge and putting in wall plate under bridge 1 mile west of St. Jean, Port Joli.

#### WORK DONE ON CAPITAL ACCOUNT.

##### *General protection of highways—*

Crossing bells were installed at West of Rimouski, Rivière Ouelle, Drummondville, between Mountain and Bic.

##### *To increase accommodation at Rivière du Loup—*

A rest house and a sand house were built.

##### *To increase accommodation at Ste. Flavie—*

Changing tracks, loading platform, new freight shed, new station and piling turntable tractor.

#### STRENGTHENING BRIDGES.

Small spans at DeLotbinière and Villeroys.

##### *To increase accommodation and facilities along the line—*

Addition to freight shed at Rimouski.

Laurier station and addition to freight shed.

##### *Improvements to loading facilities at Bureau's siding—*

Grading.

Loading platform at Bic built.

#### INTERCOLONIAL RAILWAY.

##### OFFICE OF THE SUPERINTENDENT 2ND DIVISION.

CAMPBELLTON, N.B., May 27, 1913.

Annual report for the five months ending March 31, 1913.

##### TRACK.

19.36 miles of 56, 58, 67 and 80 lb. rails were taken up and replaced by 67 and 80 lbs.

##### TIES.

5,664 ties and 5 sets of switch ties were put in track.

##### BALLASTING.

'Nil.'

##### SWITCHES AND SEMAPHORES.

New semaphore signals were erected at the following stations:—

'Nil.'

Necessary repairs were made to all semaphores, switches and telegraph signals on the division.

##### SIDINGS.

.09 of a mile additional siding accommodations have been provided at different points on the division.

## SESSIONAL PAPER No. 20

## FENCE BUILT BY OUR OWN MEN.

‘Nil.’

## SNOW FENCES.

There were built during this period, 10 rods of portable snow fence, and 19 rods of stationary snow fences.

## WHARF AND TRESTLES.—(Repairs.)

‘Nil.’

## BRIDGES AND CULVERTS.—(Repairs.)

Bartibogue bridge,  
Boiestown bridge,  
Cross Creek culverts,  
Doaktown culverts,

Marysville bridge,  
Mersereaus Brook bridge,  
Nashwaak bridge.

## PAINTING BRIDGES.

‘Nil.’

## PAINTING BUILDINGS.

Millstream, St. Alexis.

## BUILDINGS AND PLATFORMS.

Necessary repairs were made to stations and dwellings at the following places:—

Assametquaghan,	Dalhousie,	Moffats,
Astle Crossing,	Eel River,	Nepisiguit Junction,
Bartibogue,	Fredericton,	Nash's Creek,
Bathurst,	Flat Lands,	New Mills,
Belledune,	Gloucester Junction,	Nigadoo,
Berry's Mills,	Green Point,	Newcastle,
Barnaby River,	Hodgins,	Petit Rocher,
Covered Bridge,	Jacquet River,	Red Pine,
Charlo,	Kent Junction,	Rogersville,
Campbellton,	Loggieville,	St. Moise,
Chatham Junction,	Lac au Saumon,	Sayabec,
Canaan,	Little Metis,	St. Alexis,
Coal Branch,	Millstream,	Superintendent's House,
Campbellton Rest House,	Matapedia,	Trainmen's Rest House.
Doaktown,	Millnike,	
Dalhousie Junction,	Millerton,	

Necessary repairs were made to freight sheds at the following places:—

Campbellton, Canaan, Harcourt.

The following round houses and shops were repaired:—

Blackville,	Loggieville,	Newcastle.
Gibson,	Moncton,	

Stations and loading platforms were repaired at the following places:—

Taymouth.

The following new buildings were erected:—

Gibson, store.  
Campbellton, Chief Despatcher's Office,  
Coal bins, Campbellton.

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## GENERAL.

New buffers were made and set up at different points on the division when required and repairs made when necessary.

Repairs were made to crossings on the division at various points when required.

Glass was put in, and glazing done when necessary.

Ladders for buildings and semaphores were provided where necessary throughout the division.

Necessary repairs have been made to turn-tables when required.

Necessary repairs have been made to hand cars, trolleys, baggage trucks and wheel barrows throughout the division.

Sign boards were made and put up where required.

Boxes were made for packing second hand bolts and spikes when required.

MONCTON, N.B., April 21, 1913.

E. PRICE, Esq.,  
Superintendent,  
Campbellton, N.B.

DEAR SIR,—I beg to submit the following report on the work done on capital account for the fiscal year ending March 31, 1913, on No. 2 Division.

CAMPBELLTON, TO INCREASE ACCOMMODATION AT.

Station platform was completed early in the season. The subway was completed, tracks lowered and temporary stringers removed.

All tracks, grading, ballasting, etc., completed, track scale put in and heated from the engine house. Heat was also connected to the car repair shop.

DIVERSION OF LINE AT CHATHAM AND BRANCH TO WHARF.

The new line was opened for operation, November 28. Line was ballasted during the fall and partly lifted. Sidings were put in at Chatham and Nelson.

At Chatham the new station was completed as well as the permanent freight shed. A temporary freight shed was fitted up until the regular shed can be used.

At Nelson a new station with dwelling apartments for the agent was built and the old station moved over and converted into a freight shed.

A freight and passenger platform was put up at Harper's road.

The filling of Walsh's Cove for a station ground was started and about one-tenth done when work was stopped for the winter.

FREDERICTON, TO INCREASE ACCOMMODATION AT.

A concrete platform was put down around and completed with the exception of 60 feet at the west end. Track work and grading completed. Nothing done in regard to freight shed.

MONCTON, LOCOMOTIVE AND CAR SHOPS WITH EQUIPMENT AND NEW FREIGHT YARD AND CUT-OFF LINE.

Plans were made and a contract entered into with Messrs. Rhodes, Curry & Co., Limited, for the construction of an addition to the freight car repair shop. No construction work done. The Canadian H. W. Johns-Manville Co., Limited, put a cork insulating roof on the passenger car repair shop for the purpose of stopping the condensation on the interior of the roof slab. A portion of this contract amounting to \$8,076.29 is chargeable to this vote.

## SESSIONAL PAPER No. 20

## TO INCREASE ACCOMMODATION AND FACILITIES ALONG THE LINE.

*Kempt.*—A new freight shed 25 feet x 40 feet was built and occupied.

*Sayabec.*—A new station was built and the old station moved and converted into a dwelling for the agent.

*El River.*—An addition of 20 feet was made to the freight end of the station building.

*Coal Branch.*—A small addition was made to the station at the rear to provide more room in the dwelling apartment.

Respectfully submitted,

FRED. CONDON,  
*Resident Engineer.*

The following is a statement of repairs made on 3rd Division during the period November, 1912, to March, 1913, inclusive:—

## TRACK.

During the period, November, 1912, to March, 1913, inclusive, 31,496 feet of 4-inch, 4½-inch, and 5-inch rails were taken up and replaced with 4½-inch and 5-inch rails.

## TIES.

During the period, November, 1912, to March, 1913, inclusive, 10,279 ordinary ties and 8 sets of switch ties were put in track.

## BALLASTING.

Nil.

## SWITCHES AND SEMAPHORES.

New semaphore signals were erected at the following places:

Willow Park, 1.

St. John, 2.

Amherst, 1.

The following semaphores renewed and shifted to new location:

Anagance, 1

Apohaqui, 1.

Truro, 1.

The following semaphores shifted to new locations:

Penobsquis,

Bloomfield,

Quispamsis,

Rothsay,

Maccan,

Painsec Jct.,

Calhouns,

Folleigh,

Londonderry,

Westchester,

Athol,

Windsor Jct.,

Truro.

20 new switches were installed between November and March inclusive.

Necessary repairs were made to all semaphores and switches and telegraph signals on the division.

## SIDINGS.

1,733 feet of siding put in during period November to March at different places and 400 feet of siding to exhibition grounds at St. John taken up.

20—11½

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## SNOW FENCES.

511 feet of stationary snow fences were built between Maccan and Nappan.  
 500 feet of portable snow fence erected at Shediac.  
 4½ miles of snow fences repaired on Folleigh Mountain.  
 160 rods of N. B. wire fence erected at Moncton.

## WHARFS AND TRESTLES.

Necessary repairs were made to the following wharfs and trestles:—

<i>Location—</i>	<i>Wharf or trestles—</i>
D. W. T. Halifax,	Piers Nos. 2, 3, 4, 5, 7, 8, 9, and Immigration Pier.
Willow Park,	Coal pockets erected,
Springhill Jct.,	Coal trestle,
St. John,	Long wharf,
“	Ballast wharf.

## BRIDGES AND CULVERTS.

During the period November to March the following bridges and culverts were repaired:—

<i>Location—</i>	<i>Bridge or culvert—</i>
East of Belmont,	Bridge (new girder and top),
Penobsquis,	Culvert.
Scoudouc,	Culvert.
New through bridge 40 feet long put in east of Folleigh.	

## OVERHEAD BRIDGES.

<i>Location—</i>	<i>Overhead bridge—</i>
St. John.	Wall street and Stanley street overhead bridge.
Lakeside.	

## PAINTING (BRIDGES).

Nil.

## PAINTING (BUILDINGS).

<i>Location—</i>	<i>Description—</i>
Truro yard.	Small buildings.

## BUILDINGS AND PLATFORMS.

Necessary repairs were made to stations, dwellings, platforms and outbuildings on the division during the period, November to March, at the following places:—

<i>Location—</i>	<i>Location—</i>
Apohaqui.	Lakeside.
Jubilee.	Fairview.
Sussex.	Model Farm.
Anagance.	Penobsquis.
Scoudouc.	Dorchester (built new building 21 x 40 feet).
Shediac.	Dartmouth.
Pt. du Chene.	Hilden.
Truro.	Halifax and Southwestern Jct.
Alton.	Brookfield.
Windsor Junction.	Milford.
Stewiacke.	Shubenacadie.
Enfield.	Prince's Lodge.
Fall River.	
Hampton.	

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During this period necessary repairs were made to outside buildings such as water closets, also hand car houses, etc.

Necessary repairs were made to the following buildings and rooms during this period at St. John:—

Tower house, Island Yard.	Train shed, St. John.
Office, King street.	Yardmaster's office, St. John.
Elevator, St. John.	Shed No. 3, St. John.
Store room, St. John.	P. O. Dept. room, St. John.
Furnace room, St. John.	Wash house, St. John.
Parcel room, St. John.	Freight Shed, No. 9, St. John.
Baggage room, St. John.	

The following buildings at Richmond and Halifax were repaired:—

Brick freight shed,	North Street station,
Stock pens, Richmond,	D. W. T. Fire Hose houses,
Car-cleaning plant,	Coal shed, Richmond,
Grain elevator,	D. A. R. shed,
Dunn's house, Willow Park,	Government House, Campbell road.
Immigration building,	Government House, Richmond,
Power house, North street,	Flour shed,
Tool house, Richmond,	Shunter's rest house.

The following buildings at Moncton were repaired during the period November to March:—

Freight office,	Rest house.
General office,	Track blacksmith shop,
Pintsch gas plant,	Coal plant.
E. Tiffin's house,	

Built three small buildings for natural gas plants.

Round houses and shops were repaired during the period at the following places:—

St. John,	Willow Park,
Moncton,	Truro.

Necessary repairs were made during the period to the following loading platforms:—

Sussex,	Shediac,
Lakeside,	D. W. terminus,
Hampton,	Enfield.

Repairs were made to crossings on the division at various places where required. Glass was put in at various places where required.

Necessary repairs were made to turntables where necessary.

## FOURTH DIVISION.

I beg leave to submit the following statement of work covering repairs to track, buildings, bridges, &c., chargeable to revenue between November 1, 1912, and March 31, 1913.

TRACK.

BALLAST.

3,357 cubic yards ash ballast.

NOTE.—Above ashes from Stellarton engine-house, and distributed at bad spots along Eastern extension.

TIES.

14,372 ties put in track.

5 sets switch ties.

SWITCHES.

7 sets new split switches.

FENCES.

317 rods new wire fence.

450 feet snow fence.

SIDINGS.

600 foot siding put in at Wallace.

196 foot extension to W. P. MacNeil & Co's siding, New Glasgow.

200 foot extension added to Swift's siding, Sydney.

BRIDGES.

Following bridges and culverts repaired:

<i>Location.</i>	<i>Division.</i>
Bridge . . . . . Middle River,	Oxford & New Glasgow,
Bridge . . . . . Grand Narrows rest pier,	Cape Breton.
Bridge . . . . . Balls Creek,	Cape Breton.
Culvert . . . . . Pomquet, east,	Eastern Extension.
Culvert . . . . . Pomquet, west,	Eastern Extension.
Culvert . . . . . Heatherton, west,	Eastern Extension.
Culvert . . . . . Afton, east,	Eastern Extension.
Culvert . . . . . Trenton,	Eastern Extension.
Culvert . . . . . Loch Broom,	Oxford & New Glasgow.
Culvert . . . . . Sydney, Lombard St.,	Cape Breton.
Trestle . . . . . Dowlings,	Cape Breton.
Trestle . . . . . MacDonalds,	Cape Breton.
Wharfs. . . . . Pictou,	Oxford & New Glasgow.
Wharf foundation . . . Mulgrave,	Eastern Extension.

PLATFORMS.

Platform . . . . . Alma, (Ox. & N.G.)	Repaired.
Platform . . . . . Valley (Eastern)	New.

BUILDINGS.

- Engine house, Stellarton, slight repairs.
- Station, Stellarton, slight repairs.
- Car checker's office, Stellarton, slight repairs.
- Brakemen's rest-house, Stellarton, slight repairs.
- Station, Heatherton, slight repairs.
- Station, Sydney, slight repairs.

## SESSIONAL PAPER No. 20

Engine house, Sydney, slight repairs.  
 Freight shed, Sydney, slight repairs.  
 Station, Sydney Mines, slight repairs.  
 Station, North Sydney, slight repairs.  
 Station, Grand Narrows, slight repairs.  
 Station, West Bay Road, slight repairs.  
 Station, River Denys, slight repairs.  
 Station, Iona, slight repairs.  
 Engine house, North Sydney, slight repairs.  
 Rest house, Sydney, slight repairs.  
 Ash pit, Sydney, slight repairs.  
 Coaling plant, Sydney, slight repairs.  
 Station, West River, slight repairs.  
 Station, Eureka, slight repairs.  
 Station, Hopewell, slight repairs.  
 Station, Ferrona Jet., slight repairs.  
 Station, Lyons Brook, slight repairs.  
 Station, Scotsburn, slight repairs.  
 Tool house, River John, slight repairs.  
 Station, River John, slight repairs.  
 Water sluice, Pugwash, slight repairs.  
 Tool house, Sylvester, slight repairs.  
 Station, Westville, slight repairs.  
 Station, Malagash, slight repairs.  
 Freight shed, Pictou, slight repairs.  
 Ice house, Pictou, slight repairs.  
 Carpenter shop, Pictou, slight repairs.  
 Station, Pictou, slight repairs.  
 Engine house, Pictou, slight repairs.  
 Station, Sylvester, slight repairs.  
 Station, Alma, slight repairs.  
 Station, Denmark, slight repairs.  
 Engine house, Oxford Jet., slight repairs.  
 Ash pit, Oxford Jet., slight repairs.  
 Water sluice, Tatamagouche, slight repairs.  
 Station, Wallace, slight repairs.  
 Station, Harbour au Bouche, slight repairs.  
 Station, New Glasgow, slight repairs.  
 Station, Merigomish, slight repairs.  
 Station, Heatherton, slight repairs.  
 Station, Tracadie, slight repairs.  
 Station, West Merigomish, slight repairs.  
 Station, Trenton, slight repairs.  
 Station, Antigonish, slight repairs.  
 Station, Mulgrave, slight repairs.  
 Station, Heatherton, slight repairs.  
 Kitchen, Avondale, addition.  
 Kitchen, Heatherton, addition.  
 Kitchen, South River, addition.

## MISCELLANEOUS.

Cribwork, Cape Breton.

## PAINTING BRIDGES AND BUILDINGS.

Nil.

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## INTERCOLONIAL RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE.

MONCTON, N.B., May 19, 1913.

To the Canadian Government Railways Managing Board,  
Moncton, N.B.

GENTLEMEN,—I beg leave to submit the following annual report for the Maintenance of Way and Structures Department for the period from April 1 to October 31, 1912.

## TRACK.

During this period 43.69 miles of 4-inch, 4½-inch, 4¾-inch and 5-inch rails were taken up and replaced with 4½ and 5-inch rails.

## TIES.

During this period 590,308 ordinary ties and 249 sets switch ties were put in the track.

## BALLASTING.

During this period 160 miles of track was ballasted.

## SWITCHES AND SEMAPHORES.

New semaphore signals were erected at the following stations:—

Petite Rocher, 1; L'Islet, 2.

113 new switches were installed during this period.

Necessary repairs were made to all semaphores and switches and telegraph signals on the system.

## SIDINGS.

During this period 5.22 miles of additional siding accommodation has been provided at the different stations on the system.

## FENCES BUILT BY OUR OWN MEN.

During the period 44.59 miles of woven wire fence was built at different points on the system by our own men.

Necessary repairs were made to fences on the system during this period.

## SNOW FENCES.

During this period there was built 330 rods of portable snow fence.

Necessary repairs were made to all snow fences where required.

## WHARFS AND TRETTLES.

Necessary repairs were made to the following wharfs and trestles during this period:—

Ashton Junction, trestle; Nicolet, trestle; Tobins, trestle; Princes Pier, wharf; Pictou, wharf; Halifax, pier No. 1; Halifax, pier No. 2; Halifax, pier No. 3; Halifax, pier No. 4; Halifax, pier No. 5; Halifax, pier No. 6; Halifax, pier No. 7; Halifax, pier No. 8; Richmond, quay wall; Point Tupper, wharf at old transfer; St. John, long wharf; St. John, breakwater at Courtenay Bay; Point du Chene, wharf; Dorchester, wharf; Antigonish, trestle; Stellarton, trestle; Gibson, wharf; Mulgrave, wharf; Point Tupper, temporary trestle for loading coal; Mill Brook, trestle; North Sydney, wharf.

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## BRIDGES AND CULVERTS.

During this period the following bridges and culverts were repaired:—

Folleigh, bridge; St. Leonard, culvert; Montmagny, bridge; Montmagny, culvert; St. Romuald, bridge; St. Luce, culvert; Tobins, overhead bridge; Moncton, subway; Brownells, aboideau; Crowsens, aboideau; Morris Dump, culvert; Grand Narrows, culvert; Grand Narrows, bridge; Duncan, culvert; Daveluyville, bridge; Barnaby River, bridge; Barnaby River, culvert; Robinsons, under crossing; Memramcook, bridge; Memramcook, culvert; Mill Brook, bridge; Nicolet, culvert; Isle Verte, culvert; Dalhousie, culvert; Nipisiguit, culvert; Lutes Siding, culvert; Boundary Creek, culvert; Scoudouc, culvert; Scoudouc, bridge; Folleigh, culvert; Londonderry, culvert; Pictou Harbour, bridge; Ashton Junction, culvert; St. Anne, bridge; 'Old Lake Road, culvert; Boiestown, bridge; East Mines, culvert; Salt Springs, culvert; Upper Dorchester, culvert; Richmond, culvert; Gillis Cove, culvert; Manseau, bridge; Rivière du Loup (wharf branch), bridge; St. Pascal, bridge; Newcastle, culvert; Dickies Siding, culvert; Shediac, bridge; St. John, bridge (Stanley st.); River Philip, culvert; Springhill Junction, culvert; Athol, culvert; Sackville, culvert; Fort Lawrence, culvert; Hallawell Grant, culvert; East River, bridge; Trenton, culvert; Piedmont, culvert; Beaver Cove, bridge; St. Apollinaire, culvert; St. Leonard, culvert; St. Charles Junction, bridge; Trois Saumons, culvert; L'Islet, bridge; St. Phillipe, culvert; Benjamin River, bridge; Blackville, bridge; Blackville, culvert; Middle River, bridge; Wallace, bridge; Merigomish, culvert; Avondale, culvert; Heatherton, culvert; Orangedale, culvert; Mitchell, culvert; St. Rosalie, culvert; DeLotbinière, culvert; Rivière Ouelle, bridge; Cedar Hall, culvert; Frosty Hollow, culvert; Palmer's Pond, culvert; Horns, bridge; Little River, bridge; Bayfield, culverts.

## OVERHEAD BRIDGES.

During this period the following overhead bridges were repaired:

Proberts,	Overhead Bridge.
Dickies Siding,	" "
Bathurst (West of)	" "
Bathurst (East of)	" "
Otty's,	" "

## BUILDINGS AND PLATFORMS.

Necessary repairs were made to stations, dwellings and out-buildings on the system during the year at the following places.

<i>Location.</i>	<i>Location.</i>	<i>Location.</i>
Amherst,	East Mines,	Maccan,
Avondale,	Elm Tree,	Merigomish,
Assametquaghan,		Millerton,
Alma,	Fairview,	Model Farm,
Antigonish,	Fredericton,	Mulgrave,
Aulac,	Folleigh,	Montmagny,
Athol,	Flat Lands,	Manseau,
Amqui,	Fairvale,	Meadowville,
Adamsville,	Fitzpatrick's Siding,	
Apohaqui,	Ferrona Jct.,	New Mills,
		Newcastle,
Bathurst,	Gibson,	Nappan,
Beresford,	Grand Narrows,	Nicolet,
Bayfield road,	Green Point,	New Glasgow,
Barney's River,	Gloucester Jct.,	North Sydney,

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<i>Location.</i>	<i>Location.</i>	<i>Location.</i>
Bartibogue,	Jubilee,	Quispamsis,
Belledune,	James River,	Quebec,
Berry's Mills,	Jacquet River,	
Browes Point,		Rivière Ouelle,
Boisdale,	Kent Jct.,	Rivière du Loup,
Bagot,	Kempt,	Rogersville,
Bic,		River John,
Bloomfield,	Levis,	Rimouski,
Beau Rivage,	Lourds,	Riverton,
Belmont,	L'Islet,	River Philip,
Barachois,	Laurier,	Red Pine,
Brown's Point,	La Durante,	Rothesay,
Boiestown,	Lemieux,	Renforth,
	Lyons Brook,	
Campbellton,	Little Metis,	St. Cyrille,
Cap St. Ignace,	Londonderry,	St. Vallier,
Cacouna,	Lac au Saumon,	St. Arsene,
Chatham Jct.,	Lakeside,	St. John,
Cross Creek,	Loch Broom,	St. Appolinaire,
College Bridge,	Loggieville,	Springhill Jct.,
Causapscal,		Sackville,
Coal Branch,	Millstream,	Shubenacadie,
Canaan,	Metapedia,	Stellarton,
Conns Mills,	Moncton,	Sydney,
Carrier,	Memramcook,	St. Anne,
Chaudiere Jct.,	Mitchell,	St. Charles,
Calhouns,	Moffatts,	St. Pascal,
Calligans,		St. Fabien,
Chaudiere Curve.	Nashes Creek,	Salt Springs,
Cedar Hall,	Nigadoo,	St. Anaclet,
	Nauwegewauk,	St. Luce,
Derby Jct.,	North Sydney Jct.,	Sayabec,
Dorchester,	Nipisiguit Jct.,	St. Moise,
DeBert,		Salisbury,
DeLotbinière,	Old Lake Road,	St. Francois,
Daveluyville,	Oxford Jct.,	Ste. Flavie,
Dalhousie,	Onslow,	St. Simon,
Dalhousie Jct.,	Oxford,	St. Octave,
Denmark,	Orangedale.	St. Jean Port Joli.
Drummondville,		St. Romuald.
	Penobsquis,	Sussex,
Glen Emma,	Painsec,	St. Eugene,
	Pictou,	St. Leonard,
Halifax,	Point Tupper,	Scotsburn,
Harbour au Bouche,	Point du Chene,	St. Helene.
Hampton,	Plumweseeep,	South River,
Harlaka Jct.,	Passekeag,	St. Jean Chrysostome,
Hadlow,	Petitcodiac,	St. Germain,
Heberts,	Pugwash Jct.,	St. Eloi,
Harcourt,	Pictou Landing,	Sydney Mines.
Heppers Siding,	Petit Rocher.	St. Perpeture.
	Pomquet,	St. Joseph,
Isle Verte.		St. Andre,

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<i>Location.</i>	<i>Location.</i>	<i>Location.</i>
St. Alexandre,	Tatamagouche,	Waverley,
Shediac,	Tracadie,	Windsor Jct.,
Springhill,	Thomson,	West Bay Road.
	Trenton,	Westville,
Truro,		Wallace.
Trois Pistoles,	Upper Dorchester,	Wentworth.
Turgeon,		

During this period necessary repairs were made to all out-buildings such as water closets, hand car houses, coal houses, tanks, etc.

Necessary repairs were made to the following buildings, etc., this period at St. John:—

Coal pockets,  
Train shed,  
Sheds Nos. 1, 2, 5, 7, 8, 9, 13,  
Elevator,  
Coachman's shanty,  
Baggage room,  
Round house,  
Freight building,  
Station.

The following buildings at Richmond and Halifax were repaired:—

Sheds Nos. 2, 3, 4, 8, 9,  
Coal Pockets,  
Yard delivery office,  
D. A. R. freight shed,  
Grain elevator and conveyor,  
North street station,  
North street power house,  
Station—Richmond,  
Carpenter shop—Richmond.  
Trainmen's shelter—Richmond.  
Cattle shed—Richmond,  
Train shed,  
Round House (Willow Park),  
Dwellings on Campbell Road,  
Dunn's House,  
Stock pens,  
Brick freight shed,  
Car cleaning plant,  
Track scales,  
Switchman's house.

The following buildings at Moncton were repaired during this period:—

New shops.  
Ice house and platform.  
Yard office.  
Freight house.  
Station and platform,  
Cattle shed.

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Car washers building.  
 Engine house.  
 Government cottages (Main St. and Bridge St.).  
 Rest house.  
 Electric plant.

Round houses and shops were repaired during this period at the following places:—

Amherst,	Point du Chene.
Campbellton,	Rivière Ouelle,
Chaudière Jct.,	Rivière du Loup,
Dalhousie,	St. John,
Gibson,	Springhill Jct.,
Halifax,	Stellarton,
Moncton,	Sydney,
Newcastle,	Sussex,
Oxford Jct.,	Ste. Flavie,
Pictou,	Springhill.

Necessary repairs were made during this period to the following loading platforms:—

Dorchester,	Nappan,
Drummondville,	Oxford,
Fitzpatrick's,	Pictou,
Halifax	River John,
L'Islet,	Sayabec,
Londonderry,	St. Simon,
Loggieville,	Shediac,
Meadowville,	St. John.

#### PAINTING—(BRIDGES).

During the year the following bridges were painted.

#### *Location of Bridge—Description of Work.*

Barnaby River, double deck lattice girder painted.  
 Bedford, three spans painted.  
 Belmont, painted.  
 Barney's River, painted.  
 Breakey's Siding, 8 rolled beams painted.  
 Baxter's Bridge, painted.  
 Bennet's River, deck plate girder painted.  
 Cross Creek, deck plate girder painted.  
 Calvary River, painted.  
 Cedar Swamp, 4 floor beams painted.  
 Cedar Hall (East of), 1 rolled beam painted.  
 Durham, deck plate girder painted.  
 Dewar's Mills, painted.  
 Elmsdale, painted.  
 Grand Narrows, painted.  
 Groom's Cove, deck plate girder painted.  
 Hammond River (near Jubilee), 3 spans painted.  
 Isle Verte (East of), 4 rolled beams painted.  
 James River, painted.  
 Jacquet River, 3 spans painted.  
 Little Forks, double lattice girder painted.

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Lydia Brook, painted.  
 L'Anse à Giles (East of), 8 rolled beams painted, and 1 deck plate girder painted.  
 McBeans, painted.  
 Nashes Creek, through plate girder painted.  
 North Branch Charlo, 3 spans painted.  
 Oulton's, painted.  
 Penniac, 1 deck plate girder painted.  
 River Inhabitants, painted.  
 Rivière Ouelle, deck plate girder painted.  
 Soddon River, painted.  
 South Branch Charlo, 2 spans painted.  
 Shubenacadie, painted.  
 Sutherland's River, painted.  
 South River, painted.  
 St. Romuald (Under crossing), through plate girder and metal floor painted.  
 St. Joseph (East of), through plate girder painted.  
 St. Joseph (West of), through plate girder painted.  
 St. Louise (East of), deck plate girder painted.  
 St. Anne (East of), deck plate girder painted.  
 St. Moise (East of), rolled beam.  
 Trois Saumons (West of), 4 deck plate girders.  
 Union, painted.  
 West Branch Montmagny, double through plate girder painted.

## PAINTING (BUILDINGS).

*Location of Station, &c.—Description of Work.*

Alton, station, exterior and interior.  
 Alba, station, exterior.  
 Alba, freight shed, exterior.  
 Aulac, station, exterior.  
 Aulac, freight shed, exterior.  
 Adamsville, station, exterior and interior.  
 Afton, station, exterior.  
 Afton, out buildings, exterior.  
 Bedford, station, exterior.  
 Barra Glen, shelter, exterior.  
 Beaver C  ve, shelter, exterior.  
 Brown's Point, station, exterior and interior.  
 Boiesdale, station, exterior.  
 Bagot, tank, exterior.  
 Barnaby River, freight shed, exterior.  
 Berry's Mills, station, exterior and interior.  
 Barney's River, station, exterior.  
 Bayfield, station, exterior.  
 Bayfield, freight shed, exterior.  
 Charlotte, shelter, exterior.  
 Charlotte, tank, exterior.  
 Causapscau, station, exterior and interior.  
 Coal Branch, station, exterior.  
 Coal Branch, freight shed, exterior.  
 Chaudi  re, station and w.c., exterior.  
 Chaudi  re, freight shed, exterior.

Chaudière Jct., station, exterior and interior.  
Chaudière Jct., rest house, exterior.  
Chaudière Jct., umbrella roof, exterior.  
Chaudière Jct., coal and oil sheds, exterior.  
Chaudière Jct., covered platform, exterior.  
College Bridge, dwelling, exterior.  
Dartmouth, station, interior.  
DeLotbinière, tank, exterior.  
DeBert, station, exterior.  
Enfield, station, exterior.  
Eureka, station, exterior and interior.  
Elgin Road, station, exterior.  
Elgin Road, freight shed, exterior.  
Eel River, station, exterior.  
Eel River, agent's dwelling, exterior.  
Fairview, station, exterior.  
Ferrona Junction, station, exterior and interior.  
Flatlands, station, exterior and interior.  
Flatlands, freight shed, exterior.  
Folleigh, station, exterior.  
Halifax, grain elevator, exterior operations.  
Hopewell, station, exterior.  
Hadlow, station, exterior.  
Harlaka Junction, station, exterior and interior.  
Harlaka Junction, freight shed, exterior.  
James River, station, exterior.  
Kent Junction, station, exterior.  
Kent Junction, freight shed, exterior.  
Leitches Creek, station, exterior.  
L'Anse à Giles, station, exterior.  
L'Anse à Giles, freight shed, exterior.  
Lavergne, station, exterior.  
Lavergne, freight shed, exterior.  
Lac au Saumon, freight shed, exterior.  
Lac au Saumon, station, exterior.  
Lac au Saumon, coal and oil sheds, exterior.  
Levis, station, exterior and interior.  
Levis, umbrella roof, exterior.  
Levis, freight sheds, exterior.  
Levis, agent's house, exterior.  
Levis, superintendent's house, exterior.  
Lansdowne, station, exterior.  
Lansdowne, dwelling, exterior.  
Little Metis, tank, exterior.  
Lorne, station, exterior.  
Moncton, station (2nd floor), interior.  
Milford, station, exterior.  
Murray's, flag station, exterior.  
Montmagny, station, exterior and interior.  
Millstream, station, exterior and interior.  
Millstream, tank, exterior.  
McKays, station, exterior.  
Merigomish, station, exterior.  
Merigomish, out buildings, exterior.  
Mines Road, station, exterior.

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Model Farm, station, exterior.  
Nauwegewauk, station, exterior.  
Nappan, station, exterior.  
New Glasgow, storehouse, exterior.  
Orangedale, station, exterior.  
Orangedale, freight shed, exterior.  
Ottawa Brook, shelter, exterior.  
Old Lake Road, freight shed and w.c., exterior.  
Pugwash Junction, station, exterior.  
Pictou Landing, station, exterior.  
Petitcodiac, freight shed, exterior.  
Plumweseep, comb. station and freight shed, exterior.  
Passakeag, comb. station and freight shed, exterior.  
Richmond, station, exterior.  
Richmond, dwelling, exterior.  
Richmond, shed No. 8, exterior.  
Rothsay, station, exterior.  
River Philip, station, exterior and interior.  
Rockingham, station, exterior.  
Riversdale, station and roof, exterior.  
Renforth, shelter, exterior.  
Rivière Ouelle, baggage room, exterior.  
Rivière Ouelle, coal shed, exterior.  
St. Philip de Neri, freight shed, exterior.  
St. André, freight shed, exterior.  
St. Valier, freight shed, exterior.  
St. Pierre, tank, exterior.  
Ste. Rosalie, tank, exterior.  
St. George, freight shed, exterior.  
St. Edward, freight shed, exterior.  
Salt Springs, station, exterior.  
St. Jean Chrysostome, station, exterior.  
St. Jean Chrysostome, tool house, exterior.  
St. Jean Chrysostome, coal shed, exterior.  
Ste. Hélène, station and w.c., exterior.  
Ste. Hélène, freight shed, exterior.  
Ste. Hélène, tank, exterior.  
Sussex, pump house, exterior.  
St. Alexandre, station, exterior.  
St. Alexandre, freight shed, exterior.  
St. Moise, station, exterior and interior.  
St. Alexis, station, exterior and interior.  
Salisbury, station, exterior.  
Salisbury, freight shed, exterior.  
St. John, elevator conveyor and bents.  
St. John, freight sheds No. 7-9, exterior.  
St. John, 5 offices in freight sheds, exterior and interior.  
St. John, Island Yard office, exterior.  
St. John, cattle shed (I. Y.), exterior.  
Sydney, umbrella roof, exterior.  
St. Charles Junction, station, exterior.  
St. Charles Junction, freight shed, exterior.  
St. Jean Port Joli, station, exterior.  
St. Jean Port Joli, freight shed, exterior.  
St. Jean Port Joli, coal shed, exterior.

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Ste. Louise, station, exterior.  
 Ste. Louise, freight shed, exterior.  
 Ste. Anne, station, exterior.  
 Ste. Anne, freight shed, exterior.  
 St. Apollinaire, tank, exterior.  
 Trois Pistoles, station, exterior.  
 Trois Pistoles, freight shed, exterior.  
 Trois Pistoles, tank, exterior.  
 Tracadie, station roof, exterior.  
 Turgeon, combined station and freight shed, exterior.  
 Trois Saumon, freight shed, exterior.  
 Upper Dorchester, station, exterior.  
 Valley, station, exterior.  
 Windsor Junction, station, exterior.  
 Wellington, station, exterior.  
 Westville, station, exterior.  
 Wallace Bridge, station, exterior.  
 West River, station, exterior.  
 Wentworth, station, exterior.  
 Wentworth, freight shed, exterior.

The following buildings were built or repaired to replace buildings destroyed or damaged by fire during this period:

Station, Sydney.  
 Flour shed roof, St. John.  
 Station, Newcastle.  
 Agent's dwelling, Gibson.  
 Terminals, Point Tupper.  
 Station, Millerton.  
 Tank, St. Fabien.  
 Coal shed and cattle pen, Trois Pistoles.  
 Inspector's shanty, Halifax.  
 Section shanty, Halifax.  
 Power house, Willow Park.

#### GENERAL.

Gates and cattle guards were repaired throughout the line, where required.  
 Repairs were made to crossings on the line at various places, where necessary.  
 Sign boards were made and put up where required.  
 Boxes were made for packing second-hand bolts and spikes, when necessary.  
 Ladders for buildings and semaphores were provided when necessary throughout the line.

Necessary repairs were made to turn-tables, where required.  
 Glass was put in and glazing done where necessary.  
 Semaphores, switches and telegraph signals have been painted throughout the line.  
 Necessary repairs were made to hand-cars, trollies, baggage trucks and wheelbarrows, throughout the line.

Necessary repairs were made to steam shovels, steam cranes and pile drivers, &c.  
 Book cases and desks were repaired and painted.  
 Ash pits were repaired, where required.

It gives me great satisfaction, to be able to say that the road, &c., has never been in better condition than during this period.

Yours truly,

T. C. BURPEE,

*Engineer of Maintenance.*

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## INTERCOLONIAL RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE,

MONCTON, N.B., May 19, 1913.

To the Canadian Government Railways Managing Board,  
Moncton, N.B.

GENTLEMEN,—I beg leave to submit the following report for the Engineer of Maintenance Department for the period from November 1, 1912, to April 30, 1913.

The following list of capital work was taken over and supervised regarding details, plans, estimates, specification and inspections:—

## LOCATION AND DESCRIPTION OF WORK.

Chatham, freight house; Chatham, drain pipe new yard; Chatham, right of way; Chatham, ballasting; Chatham, station; Chatham, station platform; Campbellton, station; Cape Breton, survey, engineering; Fredericton, freight shed; Fredericton, station; Glebe House Cove, bridge; Halifax, coal plant; Halifax, ash plant; Halifax, remodelling Richmond yard; Halifax, freight shed Richmond; Halifax, pier No. 7 Richmond; Mulgrave, steel bridge and floor; Moncton, freight yard and cut-off; Moncton, addition to freight car repair shop; Moncton, addition and furnishing offices; Moncton, grade revisions through city; Nelson, station; Point Tupper, station; Point Tupper, apartment house; Point Tupper, sand house; Point Tupper, coal pocket; Point Tupper, turntable; Point Tupper, engine house; Rivière du Loup, sand house; Rimouski, addition to freight shed; Ste. Flavie, station; Ste. Flavie, freight shed; Stellarton, engine house; St. John, coal pockets; Sydney Mines, diversion; Truro, station; Truro, turntable; Wallace Harbour, spur line.

The following list of bridges were renewed in part chargeable to capital:—

Assametsquaghan,	St. Rosalie Junction,
Bagot,	St. Simon,
Beau Rivage,	St. Fabien,
Cedar Hall,	St. Moise,
Chaudiere Junction,	Sayabec,
Daveluyville,	Villeroy,
Glencoe,	Val Brilliant,
Holmes,	West River,
Harcourt,	Lemieux,
Isle Verte,	Lac au Saumon,
Rimouski,	Mill Stream,
St. Josephs,	Moncton (St. George st.),
Sacre Cœur,	Memramcook,
St. Pauls,	Moffats.
St. Luce,	

## GENERAL.

During the month of November the track blacksmith shop repaired steam shovels, ditchers, rotary ploughs, cranes, ledgewood unloader, ballast cars, aprons, &c.

Repairs were also made to Point Tupper transfer and S. S. Scotia.

Statements were prepared in answer to questions of the House.

A complete history of all the employees in the M. of W. & S. Department was prepared for transfer to Divisional Superintendents.

Considerable supervision was given to buildings and grounds, bridges, trestles and culverts and docks and wharfs.

Plans and estimates were prepared in connection with the appropriation for the year 1913-1914.

Yours truly,

T. C. BURPEE,  
*Engineer of Maintenance.*

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## INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE MECHANICAL ACCOUNTANT,

MONCTON, N.B., June 16, 1913.

SIR,—I beg to submit the following information for the annual report for the fiscal year ended March 31, 1913.

A.—Statement showing the number of locomotives and the different classes of other rolling stock on the line.

B.—Statement showing the mileage made, and the coal, oil, grease and waste consumed by locomotives.

Also a summary of the principal work done in the shops at Moncton, Halifax and Rivière du Loup.

The following rolling stock was purchased:

On Capital account,—

- 2 sleeping cars.
- 1 dining car.
- 2 first class passenger cars.
- 173 box cars.
- 50 platform cars.
- 20 Hart-Otis steel dump cars.
- 10 stock cars.

On Renewals accounts (revenue)—

- 23 locomotives (19 freight and 4 switching).
- 2 sleeping cars.
- 1 dining car.
- 5 first class passenger cars.
- 2 postal cars.
- 662 box cars.
- 35 refrigerator cars.
- 100 platform cars.
- 1 oil tank car.
- 80 Hart-Otis steel dump cars.
- 10 stock cars.
- 1 snow plough.

Nine of the freight locomotives, which are among the most modern type, replaced twenty-five (25) old small type locomotives condemned, the nine (9) having a tractive power of 343,680 lbs. or 32,862 lbs. in excess of the (25) twenty-five.

182 box cars, 100 platform cars, 1 oil tank car, 5 stock cars, and 1 snow plough, replaced the same number condemned.

The 80 Hart-Otis steel dump cars replaced 16 15-ton and 7 6-ton Hoppers, 66 20-ton coal cars, and 12 15-ton Gondolas, or 101 cars in all, condemned.

The 80 having a capacity exceeding the 101 by 1,418 tons.

The following cars were rebuilt in the shops at Moncton on renewals account (revenue):—

- 2 colonist cars.
- 3 platform cars.

One (1) of the colonist cars replaced No. 504 condemned and the three (3) platform replaced the same number condemned.

One (1) motor car was converted into a first-class and baggage car, three (3) postal cars were changed from postal and smoking to postal and express, and the two (2) postal cars were fitted with the pintsch gas lighting system.

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The following cars are under construction in the Moncton shops on renewals account (revenue):—

- 28 vans.
- 150 box cars.
- 1 Flanger.
- 20 box baggage.

The following work equipment was taken over from the Maintenance of Way Department:—

- 3 steam cranes.
- 1 ditcher.
- 1 steam derrick.
- 3 steam shovels.
- 1 portable rail sawing and boring machine.
- 1 pile driver.

I have the honour to be, sir,  
Your obedient servant,

J. J. WALKER,  
*Mechanical Accountant.*

G. R. JOUGHINS, Esq.,  
Superintendent of Motive Power, I.R.C.,  
Moncton, N.B.

The following work was done in the car department during the year:—

- 3 platform and 2 colonist cars rebuilt.
- 1 motor car was converted to combined first class and baggage.
- 3 postal cars were changed from postal and smoking to postal and express.
- 2 postal cars were equipped with the Pintsch gas lighting system.

The following rolling stock received general repairs:—

- |                      |                      |
|----------------------|----------------------|
| 582 freight cars.    | 79 vans.             |
| 34 snow ploughs.     | 6 flangers.          |
| 1 pile driver.       | 4 auxiliary cars.    |
| 3 box baggage cars.  | 17 first class cars. |
| 2 colonist cars.     | 5 sleeping cars.     |
| 7 postal cars.       | 1 parlour car.       |
| 8 second class cars. | 5 baggage cars.      |
| 2 dining cars.       | 1 official car.      |

The following cars received medium repairs:—

- |                                                |                  |
|------------------------------------------------|------------------|
| 1 official.                                    | 1 motor.         |
| 18 colonist.                                   | 56 first class.  |
| 23 sleeping.                                   | 10 postal        |
| 24 baggage.                                    | 29 second class. |
| 8 vans.                                        | 9 parlour.       |
| 694 freight cars.                              | 2 store cars.    |
| 14 hopper cars had coupler clearance adjusted. |                  |

The following cars received light repairs:—

- |              |                      |
|--------------|----------------------|
| 36 sleeping. | 119 first class.     |
| 28 colonist  | 59 second class.     |
| 34 baggage.  | 11 dining.           |
| 31 postal.   | 1 motor.             |
| 12 vans.     | 2 parlour.           |
| 1 auxiliary. | 13,953 freight cars. |

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The following cars were burnt off, painted, lettered and varnished:—

5 sleeping.	13 first class.
2 dining	2 second class.
1 colonist.	1 baggage.

The following cars were cleaned, cut in, and varnished:—

23 sleeping.	3 dining.
8 parlour.	63 first class.
34 second class.	20 colonist.
17 postal	29 baggage.
4 box baggage.	2 auxiliary.

The following rolling stock was painted, lettered, varnished, &c.:—

17 vans.	124 engines and tenders.
9 snow ploughs.	42 refrigerator.
1 well boring car.	9 flangers.
106 box cars.	1 steam shovel.
2 ash cars.	89 flat cars.
18 Hart-Otis steel dump cars.	1 Hart convertible.

1,185 freight cars were relettered and touched up.

A large number of articles were painted and lettered, such as ladders, wheel barrows, gangways, freight trucks, baggage trucks, window sashes, doors, smoke stacks, safes, sign boards, desks, chairs, stools, stepping boxes, tool and outfit boxes, &c., &c.

A large amount of work was done on the new wing of the General Office building, and the old part of the same building was cleaned and renovated.

#### *Cabinet Shop.*

The following articles were made:—

6 card racks.	20 packing cases.
6 outfit boxes.	36 pictures and mirror frames.
4 passenger car doors.	8 vestibule doors and frames.
43 window sashes.	70 car seats, bottoms, backs and rests.
23 candle boxes.	19 meat and bread boards.
61 panels.	141 car step ends.
73 hammer handles.	1 car platform.
23 four tread car steps.	68 large cases, for General Offices vaults.
1 ice chest.	24 sash openers.
5 letter cabinets.	14 large filing cases for General Offices.
12 ladders.	5 pigeon-holed cases, single for General Offices.
5 nest of drawers, small.	44 shelves, for General Offices.
2 nest drawers, large for General Offices.	3 car berths.
4 pigeon-holed cases, double for General Offices.	40 desk sashes.
5 filing boards.	3 tool chests.
5 large partitions for General Offices.	1 large walnut lounge.
7 panel doors.	10 wardrobes, large for General Offices.
12 skirt boards.	6 van desks.
48 stepping boxes.	6 head boards.
6 telephone boxes.	17 large travelling ladders.
1 van door.	14 high benches.
8 window reflectors.	9 wash basin fronts.
3 large bookcases.	
12 hopper tops.	

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3 stools.	5 tables.
9 sliding doors.	5 window screens.
2 sets of screen doors and jams.	5 large assorting tables.
4 large pulleys.	5 large desks.
2 large foot rests.	5 large bulletin boards .

The following articles were repaired:—

8 office doors.	1 car side door.
7 stools.	3 car racks.
7 cabinets.	6 ticket cases.
28 desks.	71 chairs.
3 desk tops.	16 closet partitions.
2 kitchen lockers.	4 book cases.
2 packing grates.	3 tables.
2 ladders.	1 wringer.
1 office safe rebuilt.	1 large timetable rack.
10 wash basin tops.	

There was also a large amount of work done on the fittings for the two colonist cars rebuilt, for converting three postal and smoking cars into postal and express, and for converting the motor car into combined first class and baggage car, also in equipping sleeping cars with new steam pipes and pillow boxes.

*Freight Car Repair Shop.*

- 204 new roofs were applied to freight cars.
- 253 freight cars were fitted with the uncoupling device.
- 97 new freight car trucks were built.
- 3 sterlingworth trucks were re-enforced.
- 45 cars were lined for potatoes.

*Upholstering Shop.*

18 first class cars received heavy repairs, such as renewing the upholstery, blinds, carpets, mattresses, &c.

7 first class cars received medium repairs, as follows:—Seats and backs washed, mattresses air blown, seats, backs and blinds partly renewed and repaired.

52 first class cars received light repairs, as follows:—Seats, backs, mattresses, carpets, wicker chairs air blown, and patching and repairs inside.

- 192 cab seats and backs were made.
- 1,014 cab curtains were made.
- 224 van cushions were made.
- 72 hose bags were made.
- 28 mattresses and pillows were made.

A large number of small jobs were also done repairing office chairs, and desks, vestibule curtains, seats and backs, window blinds, &c.

*Woodworking Mill.*

- 551 brake beams were made.
- 1,387 buffer blocks were made.
- 1,522 draft timbers were made.
- 488 truck sides were made.
- 461 truck bolsters were made.
- 704 spring boards were made.
- 94 pilots were made.
- 3,304,248 feet of lumber milled.
- 1,348 stores orders for articles for outside stores and other departments were completed.

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The following is a report of the work done in Locomotive Department at Moncton, during the year.

*Erecting shop—*

- 15 locomotives were partly rebuilt.
- 75 locomotives received general repairs.
- 34 locomotives received heavy repairs.
- 40 locomotives received light repairs.

*Blacksmith shop—*

2,307,053 lbs. iron forgings were made which includes, 1,218,244 lbs. bolts and 246,800 lbs. nuts. 966,398 lbs. steel forgings were made.

*Boiler shop—*

- 29,451 tubes were applied.
- 24,050 tubes were cleaned.
- 28,611 tubes were pieced.
- 56 side sheets were made.
- 28 door sheets were made.
- 28 tube sheets were made.
- 76 fire boxes were patched.
- 11 tender frames were made and 101 repaired.
- 154 locomotive smoke stacks were made and 40 long stacks.
- 24 oil pans were made.
- 67 ash pans were repaired and 31 made.
- 3 tender tanks were made.
- 96 tender tanks were repaired.
- 2,256 wheels were rivetted.
- 9 tender bolsters were made and 96 repaired.
- 85 sterlingworth trucks were repaired.
- 14 tenders were rebuilt.
- 59 front ends were made.
- 175 ash pan slides were made.
- 10,500 copper ferrules were made.
- 1,241 patch bolts were applied.
- 2,303 lbs. rivets were made.
- 96 petitcoats were made.
- 50 smoke box door liners were made.
- 1 snow plow was ironed.
- 15 steel cabs were applied.
- 30 ash buckets were made.
- 40 coal buckets were made.
- 84 boilers were tested.
- 3 water service boilers were repaired and tested.
- 200 scrapers were made.
- 1 crane boom was rebuilt.

*Pattern shop—*

- The following patterns were made and repaired:
- 183 for cast iron were made, 104 repaired and 15 altered.
  - 64 for steel were made, 87 repaired and 23 altered.
  - 82 for brass castings were made and 76 repaired.
  - 19 for malleable were made and 28 repaired.

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*Brass foundry—*

The following was the output of this shop:

- 433,357 lbs. brass bearings.
- 63,751 lbs. brass castings.
- 55,701 lbs. antimonial lead.
- 21,192 lbs. babbitt metal.
- 307 lbs. metallic packing.

*Brass turning shop—*

- 280 air gauges, 900 air hammers, and 275 air pumps were repaired.
- 450 lubricators were repaired.
- 550 beading tools were repaired.
- 55 brake cams were made.
- 225 brake cam nuts were made, 475 screws were made.
- 36 bell ringers were made.
- 100 sets of dies were made.
- 400 cylinder cocks were made.
- 12 blow-off cocks were made.
- 94 gauge glass cocks were made.
- 72 try cocks were made.
- 30 tender cocks were made.
- 290 engine brasses were made.
- 100 flag staff casings were made.
- 125 hydraulic jacks and 60 bottle jacks were repaired.
- 200 heater regulators were repaired.
- 500 injectors were repaired.
- 50 injector check valves were made.
- 800 oil cups were made.
- 175 pumps governors were made.
- 200 reamers were made.
- 12 steam chest release valves and 24 nipples were made.
- 600 steam gauges were repaired.
- 200 taps were made.
- 150 tube cutters were made.
- 150 wheel defect gauges were made.

In addition to the above there was a large amount of work done for the cars in the car shops and on orders for outside points, as well as for all the pump governors, heater regulators, air and brake cylinders, engine valves and boiler mountings for all the engines that went through the shops.

*Tin and copper shop—*

- 10,115 W. A. B. Couplings were fitted to new air hose.
- 4,968 couplings were fitted to signal and steam hose.
- 18,074 bushes were lined.
- 1,031 bushes were relined.
- 195 headlights and 250 reflectors were repaired.
- 28 tank delivery pipes were made and 42 repaired.
- 1,073 switch lamps were repaired and painted.
- 142 tail lamps were repaired and painted.
- 108 signal lamps were repaired and painted.
- 22 station lamps were repaired and painted.
- 56 hand lamps were repaired.
- 19 cab lamps were made.

- 464 perforated plates were made.
- 272 oilers were made and 247 repaired.
- 21 oil pumps and 6 oil tanks were repaired.
- 30 valve oil pots were made.
- 700 tin oil cup covers were made.
- 36 water cans were made and 120 repaired.
- 180 steam gauge lamps were made and 90 repaired.
- 26 water gauge lamps were made and 34 repaired.
- 47 shop lamps were made and 200 repaired.
- 101 lamp fronts were made.
- 17 coal boxes were made.
- 156 stove bases were made.
- 4 sinks were made.
- 6 ice boxes were made.
- 61 drip pans were made.
- 80 gauge glass shields were made.
- 4,000 sets valve stem packing and 3,600 sets metallic packing were made.
- 56 corner plates were made.
- 203 economy heaters were repaired.
- 110 pipe oil cups were made.

Repairs, alterations, renewals were made to copper pipes, steam pumps, lubricators, copper joints on steam chests, domes and cylinder covers, driving and truck boxes, and Westinghouse air brake pipes.

Lagging was all removed, repaired and replaced on 161 engines.

118 tenders were equipped with train line pipes for signal air and steam, and all water pipes were overhauled and repaired.

Repairs were made to wash basins, taps, water closets, lamps, brass work, piping, &c., on 201 passenger and baggage cars, 60 parlour, sleeping and dining cars, and 1 official car.

General repairs were given to the piping, sinks, &c., on 3 auxiliary cars, 28 vans, 26 refrigerator cars, 8 shanty cars, 1 bridge car, 2 tool cars, 43 potato cars, 1 milk car, and 1 store car.

Extensive repairs were made to the heating and plumbing system in the General Offices Building at Moncton, and the Yard Office.

Traffic Manager's Cottage, car cleaning building, rest room, Moncton Station; Car Mileage Office, Nelson Station; New Shops and Offices, Springhill Jct. Station; Campbellton Station; Yard Scales, Amherst Station; Roundhouse, Moncton; Assistant Chairman's Cottage, Loggieville Station; Sackville Station; Sussex Station; Chatham Jct. Station; Newcastle Station; Hampton Station; Point Du Chene Roundhouse.

New water service pipes were put in at Canaan, Coal Branch, Mulgrave, Bartibogue and Dorchester Stations and Janitor's Cottage, Moncton.

New heating system was installed in the General Offices Building, also all the pipe fitting and plumbing.

Repairs were made to all the gutters on the new shops and other buildings at the new works.

New closets were installed at Newcastle station.

All the stoves and pipes were repaired and put up in the different stations between St. John and Halifax, Indiantown, Dalhousie and Dartmouth Branches, Loggieville and Fredericton, Moncton and Campbellton.

The steam pipes at the Pintsch Gas Plant were overhauled and repaired, also the heating pipes in the Track Blacksmith shop.

Sand Drier at Amherst was rebuilt and a large amount of work was done on piping for the S.S. *Scotia*.

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The card racks for time clocks were repaired and a number of holders were added.

70 sheets of galvanized car roofing were repaired for the Car Department and 68 covers were made for copper cans and kettles of dining cars.

Four low down closets were installed in Moncton Station and the old one removed.

The old conductor pipes were removed from the Freight House at Moncton and new pipes put on.

And a large amount of work done in connection with the changing of the piping of the Ice House extension.

*Tender Shop—*

- 104 wooden cabs were repaired.
- 45 cab doors were made and 229 sashes were made.
- 3 tender tanks were lengthened, 55 received general and 60 heavy repairs.
- 222 valves were repaired.
- 200 valve spindles were repaired.
- 211 running boards were made and 106 were repaired.
- 49 front beams and 29 back beams were made.
- 807 side curtains were made.
- 254 cab seats were made.
- 118 headlight bases were made and 48 were repaired.
- 650 hammer handles were made.
- 2,404 sledge handles were made.
- 60 wrench handles were made.
- 115 mallets were made.
- 251 switch lamp and semaphore bottoms were made.
- 99 outfit boxes were repaired.
- 130 tool and shipping boxes were made.
- 36 tender truck frames were made.
- 198 tender trucks were repaired.
- 12 wheel barrows were made and 63 were repaired.
- 59 tender frames were repaired and 7 were made.
- 13 quadrants were made.
- 3 tender frames were lengthened.
- 23 back castings and 10 buffer beams were made.
- 14 front castings and 17 centre castings were made.
- 12 tender steps were made and 40 repaired.
- 60 drop curtains were made.
- 1,420 pump laggings were made.
- 8 hand carts were made.
- 164 covering boards were made.
- 26 ladders were made and 9 repaired.
- 131 tender journal boxes were applied.
- 29 transoms were made.
- 90 tender cab floors were laid.
- 12 valve spindles were made.
- 28 foot boards were made.

*Machine Shop—*

- 195 new driving tires were applied and 772 were turned.
- 206 new engine truck tires were applied and 472 were turned.
- 438 new tender tires were applied and 3,793 car and tender tires turned.
- 19 trailer truck tires were turned and 190 tires were shimmed.

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- 988 new car tires were applied and 976 were turned and fitted.
- 258 driving journals were turned up and 395 hubs were faced.
  - 5 crossheads were made and 241 were replaned.
- 182 cylinder heads were made.
  - 55 piston rods were made and 96 trued up.
  - 17 cylinders and half saddles were made.
  - 16 engine truck centres were made.
  - 42 guide bars and 123 guide blocks were made.
- 889 driving wedges were made.
  - 6 locomotive frames were machined.
- 272 pop valves and 131 whistles were repaired.
  - 26 steam chests were made.
  - 17 steam chest covers were repaired.
  - 24 gas retorts were machined.
  - 19 cylinder bushings were bored out and fitted.
  - 70 engine truck boxes were made.
- 641 wedges were replaned.
  - 11 tender axles, 35 driving axles, and 4 car axles were fitted.
  - 5 trailer axles and 11 engine truck axles were fitted.
- 7,483 new and second-hand axles were turned.
  - 70 smoke box doors and rings were made.
  - 34 crank pins were made.
- 50,300 stay bolts were threaded and 12,500 were made.
- 1,161,750 bolts were threaded including forged and turned bolts.
  - 19,490 studs were made.
- 277,360 nuts were tapped and 190,385 faced.
  - 182 cylinder heads and 5 crossheads were made and 4 rebored.
  - 175 driving boxes were planed and fitted.
    - 8 engine truck housings were made.
    - 43 housings were made for passenger cars.
    - 51 eccentric pulleys were made.
    - 41 dome covers were machined.
- 14,966 chilled wheels were bored and pressed on axles.
- 16,778 chilled wheels were pressed off axles.
  - 545 steel tired wheels were bored and pressed on axles.
    - 2 engine trucks extended.
    - 1 engine truck bolster made.
  - 154 driving brasses slotted.
    - 4 driving wheels centres were made.
    - 56 grease boxes were made.
    - 27 retaining rings were made.
    - 39 fulcrum bushings were made and fitted.
- 1,144 tender tires were turned.
  - 6 side rods were milled, planed and slotted.
  - 95 eccentric straps were made.
  - 5 engine truck frames were made.
  - 2 spectacle plates were made.
  - 24 equalizing rods were made.
  - 5 cylinders were bushed.
  - 72 equalizing bushes were made.
  - 13 knowels pumps were repaired.
  - 4 cheek plates were made and fitted to hubs.
- 120 driving brasses were planed.
- 22 eccentrics were made complete.

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Air compressors at the roundhouse Moncton and the Pintsch gas plant received general repairs.

Coaling crane at St. John received general repairs.

Ash handling plant for Halifax was made.

Pintsch gas engine at Moncton was repaired.

Two air compressors were rebuilt.

2 coaling cranes received general repairs.

2 coal handling plants were made, 1 for St. John and 1 for Halifax.

*Motion shop—*

4 links were made.

204 link-pins, blocks and bushes repaired.

25 link hangers were made and 91 repaired.

45 link blocks were made.

134 eccentric rods were made and 350 repaired and pins fitted.

130 equalizing bars were repaired.

78 reversing shafts were turned up and pins and bushes fitted.

41 reversing shaft boxes were made.

163 reversing shaft boxes were repaired.

110 reversing liners were overhauled and pins and bushes fitted.

100 reversing reach rods were repaired and pins fitted.

22 new valves were made.

186 valves faced and yokes fitted.

131 valve rod keys were made.

90 valve stems were fitted to yokes.

55 valve heads were faced.

52 valve division rings were made.

404 valve packings machined and fitted.

57 valve guide boxes were bushed.

90 throttle rods were repaired and 39 ends fitted.

86 throttle glands were bushed.

97 throttle levers were fitted with quadrants, springs and pins.

220 big end brasses were machined and fitted.

41 old big end brasses were machined and fitted.

199 small end brasses were machined and fitted.

184 main rod liners were made and fitted.

221 big end keys were made.

621 side rod bolts and 640 nuts were made.

627 side rod brasses were made and fitted.

552 knuckle joint pins and bushes were made.

190 crossheads were trued up and keys fitted.

139 crosshead pins were made.

50 piston rods machined and keys fitted.

42 rocker boxes were made and 194 lined.

194 rocker box bushes were fitted.

317 hub plates were applied.

293 driving box brasses were made and applied.

298 driving box brasses were relined and applied.

91 driving boxes were made.

460 driving boxes were bored and fitted to axles.

242 spring guards were machined and applied.

203 eccentric straps were made and 133 rebored and fitted.

62 eccentric pulleys were made and 177 bored and refitted.

5 rocker arms were made and 50 turned.

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- 30 elvin grease spring plates were applied.
- 35 valve bushes were fitted to steam chests.
- 8 new ends were applied to valve rods.
- 128 eccentric keys were made.
- 10 passover valves were made.
- 80 knuckle pin nuts were made.
- 54 crank pin caps and nuts were made.
- 130 crank pin washers were faced.
- 144 eccentric feathers were machined.
- 18 eccentric rod jaws were made.
- 5 reach rod jaws were made.
- 30 valve yoke stems were trued up.
- 92 reversing lever springs were made.

Blacksmith shop transferred from Maintenance Department in December.

- 168 split switch points with caps and bolts were made.
- 59 spring frogs were made.
- 90 rigid frogs were made.
- 5 hand cars were made and 24 repaired.
- 56 double head rods were made.
- 76 slide plates were made.
- 239 rail cutters were repaired.
- 6 rail tongs made.
- 33 switch stands were made and 3 repaired.
- 20 head chairs were made.
- 14 iron knees were made.
- 520 lbs. screw bolts were made and applied.
- 74 rails cut and delivered.
- 83 hinges were made.
- 50 fastenings were made.
- 856 guard rail bolts were made.
- 75 guard rails castings were machined.
- 32 hooks and links were made.
- 80 claw bars were made.
- 63 spiking hammers were repaired.
- 57 picks were made and 142 repaired.
- 10 drills were made and 54 repaired.
- 38 ratchets were repaired.
- 1 pump was repaired.
- 14 chisels were made and 32 repaired.
- 4 adze were repaired and 3 made.
- 7 axes were repaired.
- 1 sledge was made.
- 39 wrenches were made.
- 8 semaphore wenches were made.
- 98 rail braces were machined.
- 37 sets of switch gear were made.
- 2 diamond crossings were made.
- 158 pairs bar fish plates were made.
- 19 steel stone points were made.
- 126 guard rails were made.
- 14 jacks were repaired.
- 1 stumping machine was made.
- 370 connecting rods were made.
- 4 iron transfer houses were made.
- 37 anchors for concrete work were made.

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Rotary plow No. 2 received general repairs.

Ten machines, including steam shovels, ditcher, pile drive, rail sawing machine, cranes, etc., received a general repair.

*The following special work was also done:—*

Tube cleaner in the boiler shop was repaired with new wheels which were made in the shop here.

Hydrauligraphs were installed on the wheel presses.

Hot water tank was built for machine shop and set up.

Rotary scrubber in the gas plant was equipped with two new shafts and received a general repair.

All the machinery in this plant was thoroughly overhauled and put in shape.

Concrete base installed in the blacksmith shop for steam hammer, and hammer installed.

A crane was installed complete in the brass shop with foundation.

All the tubes in the boilers at the power house were examined, the boilers were also examined and the tubes were renewed.

A lot of work was done on the elevator at the general offices.

Two new pistons were applied to the gas engines in the power house.

A pipe line was installed in the freight car shop.

Changes were made in the valve gear and alterations were made in the gas engines in connection with the using of the natural gas.

A track bolt furnace was installed in the blacksmith shop with foundation complete.

Some changes were made to the boilers in boiler room to fit them for the use of natural gas, also the furnaces in the blacksmith shop and in the track blacksmith shop.

All the sewers in the blacksmith shop were lifted and pipes renewed.

The heating system in the basement of the stores building was overhauled.

All the travelling overhead cranes in the shop were given a general repair and all parts renewed where necessary.

*The following special work was also done:—*

## MONCTON.

1,402 freight cars had the F-36 triple valve removed and were equipped with the new style, K 1 triple.

Of the 384 fire extinguishers bought last year, 100 were put in place in passenger cars while the cars were in the shops for repairs.

Of the 135 emergency tool boxes made last year, 52 were placed in passenger cars, while the cars were in the shops for repairs, in addition to the 58 placed in cars last year.

A 11-in. Westinghouse air brake pump, an air receiver and 1,500 feet of piping with 33-in. hose connections were installed in the car cleaning yard at Moncton for blowing dirt out of cars and testing air brakes on cars.

Safety appliances, as called for by the Railway Commission, were fitted to 150 passenger cars, and 654 to freight cars.

A turbine vacuum plant driven by a 10 h.p. electric motor, and 1,500 feet of piping with 33-in. hose connections, were installed in Moncton car cleaning yard for cleaning car cushions and carpets without removal from cars.

## CAMPBELLTON.

A cross-compound steam two stage air compressor was purchased and installed at Campbellton engine house.

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## ST. JOHN.

A turbine vacuum plant driven by a 10 h.p. electric motor, and 1,000 feet of piping with 25 in. hose connections, were installed in car cleaning yard for cleaning car cushions and carpets without removal from cars.

## POINT TUPPER.

A 150 h.p. horizontal return tubular boiler, a second hand duplex air compressor, after receiving a general repair in Moncton shops, and air reservoir, a closed feed water heater, a feed pump and receiver, a water pump, and about 11,000 feet of various sizes of pipe up to 5-in. including steam, air, water and heating pipes, were installed in the new roundhouse at Point Tupper.

## SS. 'SCOTIA.'

A 28-in. x 52-in. extension gap lathe, and a 24-in. vertical drilling machine, were purchased and installed on SS. *Scotia*.

Turntable tractors were purchased and installed on the turntables at Sydney, Point Tupper, Mulgrave, Stellarton, Truro, Halifax, St. John and Ste. Flavie.

## ELECTRICAL DEPARTMENT.

Installed 46 signal bells at highway crossings on Intercolonial railway in Quebec, New Brunswick and Nova Scotia.

Wired new station at Ste. Flavie for electric lighting, also installed semaphore wires.

Installation of electric light system in new station at Truro partially completed. When old building was being moved had to change wires in order to keep building lighted.

Wired (in conduit and moulding) old portion of general offices at Moncton for electric lighting, also rewired for call bells. Wired for lights in addition to general offices building and installed call bells.

Installed electric light fixtures in new station at Mulgrave.

Installed lighting, semaphore and telephone wires at Point Tupper (replacing wires destroyed by fire).

Wired new station at Chatham for electric lights.

Change poles, wires, &c., at Richmond due to change in tracks.

Installed two crossing signal bells at highway crossing at Charlottetown.

New telegraph lines from Harmony to Elmira.

New freight shed at Truro wired for electric lights.

Installed electric lights at scale box at Campbellton.

Wired vacuum plant at St. John for motor drive and electric light.

Wired vacuum plant at Moncton for motor drive and electric light.

Wired new engine house at Point Tupper for electric light.

Operated Pintsch gas plant for lighting cars.

Operated steam plant for heating cars on storage siding.

Railway telephones, electric semaphores, batteries, &c., at stations on the Intercolonial railway kept in working condition.

Operated electric light plants at St. John, Halifax, Stellarton and Campbellton, for supplying current for power and for lighting of railway premises.

Operated electric plant Rivière du Loup for power.

Electric light and bell equipment on cars, maintained in good working order.

Alarm bells at highway crossings, maintained in good order.

Electric light equipment in stations, freight sheds, offices, shops, engine houses, &c., kept in repair and necessary lamps installed to keep up the service.

Wired new six stall engine house at Stellarton for electric lights.

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Wired old station at Stewiacke for electric lights.

Wired coaling plants at St. John for electric lights.

94 headlight armatures rewired and commutators turned down.

65 headlight lamps, all old parts, renewed, dipped, pointed and tested.

24 engine cabs, repiped, rewired, hand rail wired and connected up.

14 D.C. armatures rewired with new coils and commutators turned down.

26 A.C. armatures rewired with new coils and repaired.

8 magnet brake coils for cranes, rewound and repaired.

26 solenoid coils for headlight lamps rewound.

24 top and bottom field coils rewound and covers renewed.

1,200 extension cords and guards repaired for all departments.

400 new extension cords and guards were made.

8 new Benjamin clusters wired and placed outside car repair shop.

8 posts put in for same and line of wire and cross-arms put up, also twelve cross-arms put up inside car repair shop and wire and switches put up for same.

1 Benjamin cluster rewired and installed with pole line and switch, between car repair shop and blacksmith shop.

2 lights installed in lumber yard office, which was wired and piped for above lights and fitted with drop cords and lamps. An outside line was run from the planing mill for this service.

4 lights installed for old engines north of the paint shop, which are used for heating.

3 lights installed in closet of paint shop after fire, which was wired and piped for same.

12 desk lights installed in draughting office, piped and wired for same.

16 desk lamps buffed, wired and parts renewed, for the mechanical offices.

4 lights placed in a cluster were installed in timekeeper's office, which was rewired.

Piped and changed wiring in gas house for twelve lights.

32 lights, piped and put wire and condulets for extension cord under bench in the erecting shop.

Rewired and moved motor in cabinet shop to brass room for drill.

Wired for motor and starter, also piped, on miller, in machine shop.

Wired and piped for motor and starter in machine shop, on axle key cutting machine.

Wired and piped for motor and starter in blacksmith shop on track bolt machine.

Wired and piped, also installed new motor on large shears in blacksmith shop.

Ran D.C. line with cross arms in boiler shop for electric drills. Piped walls and put connecting boxes on same.

Piped wall and wired for extension lamps and connecting boxes in boiler and tender shops.

Piped and wired for valve setting motor for each pit.

Put switches and guard boxes on each line in erecting shop and ran line for same.

Wired motor and put two through switches and extension leads on same for valve setting machine, machine shop.

Piped for motor and starter, and wired for asbestos grinding machine, erecting shop.

Piped and wired for motor and starter in car repair shop after office fire, placed new starter and frame for same.

Repaired and placed two copper-hewitt lamps in brass moulding shop.

Wired and placed 19 lights on lathes in machine shop, with extension and drop cords.

Repaired and replugged all pipe in mechanical offices and switches.

Repaired and renewed all lamps in mechanical offices.

Repaired and replugged all pipe in general store and basement.

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Repaired all drop cords and renewed all lamps, also repiped office in car repair shop, also two arc lamps installed.

Repaired all drop cords and renewed all lamps in paint and upholstering shops.

Repaired all drop cords and renewed all lamps in cabinet shop.

Repaired and renewed all leads and parts of copper-hewitt lamps in erecting, blacksmith, machine, brass and bolt shops (95 lamps).

Renewed thirty-six tilters for copper-hewitt lamps.

Renewed fifty-four tubes for copper-hewitt lamps.

1,000 lamps, Tungsten and carbon, renewed in all the shops.

250 locking guards renewed in shops.

150 Tungsten lamps renewed in mechanical offices.

2 Lights installed, wired and line run for gas meter house fitted same with drop and extension cords.

General repairs made to all motors with bushings and brushes for cranes in shops (six cranes).

General repairs to controllers, new finger points and new castings for different cranes in shops.

Renewed trolley shoes several times on cranes in shops.

Replaced eight trolley wires on different cranes.

Renewed eight brake wires several times on the four cranes in erecting shops.

Six steel cables renewed on different cranes.

Repaired and spliced twelve cables on different cranes.

Inspected steel cables once a week, on every crane in shops.

Repiped, wired, new casting and new resistance on electric hoist in machine shop.

Rewired and repaired several times the electric hoist in boiler shop.

On outside lighting, straightened poles, put new guy wires and painted goose-necks and hoods.

Piped and wired for one light between erecting and boiler shops.

Placed line of 3-inch pipe and of duck and cable between car repair shop and planing mill. Also 2-inch pipe line and wire for same.

Ran 3-inch pipe line and cable temporarily, between car repair shop and planing mill for power.

Renewed and repaired bells, batteries and wires in mechanical offices.

Renewed battery for signal gong between erecting shop and power house.

Renewed batteries between gas house and power house.

General repairs made on the transfer table, new brushes, controller, points, trolley wheels renewed and painted.

The blue print machine in the draughting office was cleaned and given general repairs.

Renewed brushes and bushings on several D. C. motors and had commutators turned down.

Renewed fingers, casting, and points on several D.C. starters.

Repaired several resistance boxes.

Renewed bushings and housings, switches and fingers on A. C. motor starters in machine shop.

Repaired all motors and starters in car repair shop, with new bushings and fingers, also rewired in several cases.

Repairs made to ignition set on armatures in power house.

Lights renewed and wires repaired in boiler room.

#### WATER SERVICE.

This service has been maintained in efficient condition during the year over the whole line.

## SESSIONAL PAPER No. 20

## RIVIERE DU LOUP SHOPS.

The following regular work was done during the year:—

- 23 Locomotives received general, 1 heavy, 18 light, and 55 specific repairs.
- 613 new tubes were applied and 6,454 pieced.
- 22 fire boxes were patched.
- 87 boilers were tested.
- 89 driving tires were turned off.
- 63 engine truck tires were turned off.
- 131 tender truck tires were turned off.
- 21 pilots were made.
- 20,318 bolts were forged.
- 33,743 bolts were screwed.
- 3,471 studs were screwed.
- 57 engines and tenders were painted.
- 44,503 lbs. brass casting were finished.
- 2,701 sets metallic piston rod and 3,331 sets valve stem packing were made.
- 37,543 lbs. iron forgings were made.
- 439 driving springs were repaired.
- 125 engine truck springs were repaired.
- 75 tender truck springs were repaired.
- 8 driving springs were made.
- 18 tender truck springs were made.

A large number of cars received light repairs during the year, and a number of jobs were done for other departments of the railway.

## HALIFAX SHOPS.

The following regular work was done during the year:—

- 5 locomotives received medium repairs.
- 163 locomotives received specific repairs.
- 23 boilers were tested.
- 5 sets driving tires were turned off.
- 5 sets engine truck tires were turned off.
- 1,350 bolts were forged.
- 12,235 bolts were screwed.
- 1,115 studs were screwed.
- 5 engines and tenders were painted.
- 203 sets metallic piston rod packing were made.
- 189 sets valve stem packing were made.

A large number of freight cars received light repairs and a number of jobs were done for outside departments of the railway.

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## "A"—INTERCOLONIAL

STATEMENT showing the number of Locomotives and the different classes

	Locomotives.	Sleeping cars.	Parlour cars.	Dining cars.	Colonist cars.	First class passenger cars.	Second class passenger cars.	Postal cars.	Baggage cars.	Box baggage cars.	Air brake instruction cars.	Steam motor cars.	Box cars.
On hand serviceable and repairing March 31, 1912.	392	41	9	12	53	139	89	34	69	6	1	2	7003
To be replaced on March 31, 1912.						1	16						92
Total equipment, March 31, 1912.	392	41	9	12	53	140	99	34	69	6	1	2	7095
Purchased during the year on capital account.		2		1		2							173
Purchased during the year on renewals account.	14	2		1		5		2					480
Built in the shops at Moncton on renewals account.					1								
Converted in the shops at Moncton from steam motor to 1st class and baggage						1						1	
Purchased during the year on renewals account to replace 16-15 ton hoppers, 7-6 ton hoppers, 66-20 ton coal and 12-15 ton gondolas condemned. The 80-50 ton Hart-Otis cars having a capacity exceeding the 101 small cars by 1,418 tons.													
Deduct 23 hoppers, 16-15 ton and 7-6 ton, 66-20 ton coal and 12-15 ton gondolas replaced by the 80 Hart-Otis cars.													
Purchased during the year on renewals account to replace 25 old small type locomotives condemned.	9												
Deduct 25 old small type locomotives replaced by 9, 4 switching and 5 consolidation. The 9 having a tractive power of 343,680 lbs. against 310,818 of the 25	25												
Transferred from Maintenance of Way Department.													
Total equipment, March 31, 1913.	390	45	9	14	54	148	99	36	69	6	1	1	7748
To be replaced at March 31, 1912, as above.						1	10						92
Condemned and destroyed during the year.	25				1		1		1				90
Total condemned and destroyed March 31, 1913.	25				1	1	11		1				182
Deduct 25 locomotives and 101 small cars as shown above.	25												
Purchased on renewals account to replace													182
Rebuilt in Moncton shops on renewals account to replace.					1								
To be replaced March 31, 1913.						1	11		1				
Add serviceable and repairing.	390	45	9	14	54	147	88	36	68	6	1	1	7748
Total equipment March 31, 1913	390	45	9	14	54	148	99	36	69	6	1	1	7748

## SESSIONAL PAPER No. 20

## RAILWAY OF CANADA.

of other Rolling Stock on the line on March 31, 1912, and March 31, 1913.

Refrigerator cars.	Platform cars.	Pulpwood cars.	Oil tank cars.	Hopper cars.	Gondola cars.	Coal cars (20 tons).	Hart-Otis steel dump cars.	Stock cars.	Hart convertible dump cars.	Auxiliary cars.	Vans.	Stores supply cars.	Pintsch gas cars.	Total cars.	Common snow ploughs.	Wing ploughs.	Rotary steam ploughs.	Double track ploughs.	Double end ploughs.	Flangers.	Total ploughs and flangers.	Steam cranes.	Ballast plough cars.	Well boring cars.	Ditchers.	Steam derricks.	Steam shovels.	Portable rail sawing and boring machines.	Pile drivers.	
144 ...	2949 108	50 2	54 1	654 9	5 12	415 27	176 ...	146 2	199 1	23 ...	111 8	1 ...	1 ...	12386 273	50 1	22 ...	2 ...	2 ...	2 ...	140 1	117 2	15 ...	2 ...	1 ...	...	...	...	...	...	
144 ...	3057 50	52 ...	55 ...	663 ...	17 ...	442 ...	176 20	148 10 5	200 ...	23 ...	119 ...	1 ...	1 ...	12659 258 530 1	51 ...	22 ...	2 ...	2 ...	2 ...	141 ...	119 ...	15 ...	2 ...	1 ...	...	...	...	...	...	
...	...	...	...	...	...	...	80	...	...	...	...	...	...	...	80	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	23	12	66	...	...	...	...	...	...	...	101	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	1	1	3	1	1
179 ...	3197 108	52 2	55 1	640 9	5 12	376 27	276 ...	163 2	200 1	23 ...	119 8	1 ...	1 ...	13427 273	51 1	22 ...	2 ...	2 ...	2 ...	141 1	119 2	18 ...	2 ...	1 ...	1 ...	1 ...	3 ...	1 ...	1 ...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	207	3	1	23	12	66	...	5	1	...	9	...	...	523	2	...	...	...	...	1	3	...	...	...	...	...	...	...	...	...
...	...	...	...	23	12	66	...	...	...	...	...	...	...	101 288	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
...	3	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	104	3	...	...	...	...	...	...	1	...	9	...	...	130	1	...	...	...	...	1	2	...	...	...	...	...	...	...	...	...
179 ...	3003 49	55 55	640 5	376 5	276 5	163 376	276 276	163 163	199 199	23 23	110 110	1 1	1 1	13297 13297	50 50	22 22	2 2	2 2	1 1	40 40	117 117	18 18	2 2	1 1	1 1	1 1	3 3	1 1	1 1	
179 ...	3107 52	55 55	640 5	376 5	276 5	163 376	276 276	163 163	200 200	23 23	119 119	1 1	1 1	13427 13427	51 51	22 22	2 2	2 2	1 1	41 41	119 119	18 18	2 2	1 1	1 1	1 1	3 3	1 1	1 1	

## " B "

## INTERCOLONIAL RAILWAY OF CANADA.

STATEMENT of Mileage and Coal, Oil, Grease and Waste consumed by Locomotives  
for the year ended March 31, 1913.

Months	Consumption.						Average Consumption per 100 miles.				
	Locomotive Mileage.	Tons of Coal	Pints of Valve Oil.	Pints of En- gine Oil.	Pounds of Wool waste.	Pounds of Grease.	Pounds of Coal.	Pints of Valve Oil.	Pints of En- gine Oil.	Pounds of Wool waste.	Pounds of Grease.
1912.											
April . . . .	845,257	50,144	12,222	25,357	918	3,468	13,288	1'44	3'00	11	41
May . . . . .	830,762	46,701	12,246	25,456	967	3,470	12,592	1'47	3'06	12	41
June . . . . .	819,211	45,122	12,041	24,785	839	3,161	12,338	1'47	3'03	10	39
July . . . . .	846,592	45,362	12,266	24,701	853	3,643	12,000	1'45	2'92	10	43
August . . . .	848,900	47,744	12,412	24,632	750	2,852	12,598	1'46	2'90	09	34
September . .	813,467	46,078	11,711	22,723	712	3,807	12,688	1'44	2'79	09	47
October . . .	848,194	49,351	12,177	23,314	629	3,917	13,033	1'44	2'75	07	46
November . .	855,140	52,460	13,630	24,828	554	4,501	13,730	1'59	2'90	06	53
December . .	910,094	60,047	13,510	26,652	783	4,298	14,779	1'48	2'93	09	47
1913.											
January . . . .	932,889	62,743	14,015	26,873	674	3,411	15,065	1'50	2'88	07	39
February . . .	811,938	58,058	12,665	24,355	827	4,084	16,017	1'56	3'00	10	50
March . . . . .	916,925	65,567	14,864	28,646	775	4,751	16,018	1'60	3'12	08	52
Total . . . .	10,279,369	629,377	153,759	301,322	9,271	45,563	13,715	1'50	2'92	09	44

## WINDSOR BRANCH RAILWAY.

OFFICE OF THE ENGINEER OF MAINTENANCE,  
MONCTON, N.B., 19th May, 1913.

To Canadian Government Railways Managing Board,  
Moncton, N.B.

GENTLEMEN,—I beg leave to submit the following annual report for the Maintenance of the Windsor Branch Railway for the period from April 1st, to October 31st, 1912.

## TRACK.

During this period 91,9669 feet of 56-lb. and 58-lb. rails were taken out of track and the same quantity of 67-lb. relayed.

## TIES.

During this period 17,060 ordinary ties and 7 sets of switch ties were renewed.

## BALLAST.

During this period 980 cu. yds. of ballasting was done.

## SWITCHES AND SEMAPHORES.

14 new switches were installed during this period.  
Necessary repairs were made to all switches and semaphores along the line.

## FENCES.

During this period 700 rods of woven wire fence was erected along the line.  
Necessary repairs were made to all existing fences along the line.

## WHARFS AND TRESTLES.

Necessary repairs were made to all wharfs and trestles on line.

## BRIDGES AND CULVERTS.

During this period the following bridges and culverts were repaired on the branch.

<i>Location.</i>	<i>Bridge or Culvert.</i>
Wilkins Siding,	Bridge,
Daly's,	Bridge,
Sharpe,	Bridge,
Stillwater,	Bridge,
Newport,	Reservoir bridge,
Stillwater,	Culvert,
Glassey's,	Culvert,
Ste. Croix,	Bridge,
Pences Lake,	Culvert.

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## BUILDINGS AND PLATFORMS.

During this period the following buildings and platforms were repaired on line:—

<i>Location.</i>	<i>Building or Platform.</i>
Beaver Bank,	Platform,
Dartmouth,	Engine house,
Ellerhouse,	Platform,
Hartville,	Station,
“	Platform,
Mt. Uniacke,	Station,
“ “	Coal house,
Newport,	Freight shed,
“	Platform,
Stillwater,	Platform,
Windsor Jet.,	Platform,
Windsor,	Engine house,
“	Tool house,
“	Hay shed,
“	Platform,

During this period Waverly station and freight shed exteriors were painted and the floors of Mt. Uniacke station painted.

Necessary repairs were made to hand-cars, trollies; and the track on the Windsor branch, with bridges and structures, have been kept in good repair during the year.

Yours truly,

T. C. BURPEE,  
*Engineer of Maintenance.*

INTERCOLONIAL RAILWAY AND  
WINDSOR BRANCH.

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STATEMENTS OF COMPTROLLER AND TREASURER

No. 1.—INTERCOLONIAL RAILWAY.  
CAPITAL ACCOUNT.—Year ended March 31, 1913.

1912.	Dt.	\$	cts.	\$	cts.	1912. March 31	Cr.	\$	cts.
March 31.	To cost of Intercolonial Railway to date.			94,745,819	64	By Dominion of Canada.		94,745,819	64
	Strengthening bridges.		50,299	94					
	Increase accommodation at Halifax.		123,245	43					
	Locomotive and car shops with equipment and new freight yard and cut off line at Moncton		18,764	99					
	Sidney Mines diversion.		128,197	32					
	Division of line at Chatham and branch to wharf.		114,927	21					
	Increase accommodation at Campbellton.		126,290	77					
	Additions to and furnishings for office buildings at Moncton.		36,424	89					
	Increase accommodation at Truro.		146,721	48					
	General protection of highways.		8,588	58					
	Increase accommodation at Stellarton.		9,000	00					
	Increase accommodation and facilities along the line.		68,700	03					
	Increase accommodation at Fredericton		15,582	40					
	Improvements at Mulgrave.		7,724	74					
	Rolling stock.		400,000	00					
	Spur line to Wallace Harbour.		967	82					
	Improvements at Point Tupper.		93,000	00					
	Improvements at Sussex.		95	65					
	Improvements at Hampton		4,028	03					
	Increase accommodation at Ste. Flavie.		26,386	81					
	Improve triple valves of air brakes.		7,149	93					
	New machinery of steamer <i>Scotia</i> .		1,104	00					
	Surveys and inspection.		32,097	23					
	Increase accommodation at St. John.		34,774	71					
	Safety appliances for equipment.		7,384	27					
	Docks and Wharfs at Halifax.		351,385	06					
	Pay the Halifax and Eastern Railway Company for plans, surveys, field notes, etc., taken by the Government.		85,000	00					
	Increase accommodation at Riviere du Loup.		5,713	16					
	Additional facilities at Princess Pier.		122	20					
	Towards the construction of a railway from a point on the Intercolonial Railway at or near Dartmouth in the County of Halifax via Musquodoboit Harbour and the Valley of the Musquodoboit to Dean's Settlement in the said County.		539,791	24					
	Original construction.		206	10					

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Improvements at Loggneville (Exchequer Court Award).....	2,535 38			
Pay claim of E. A. Wallberg for work done on the Intercolonial Railway under Government contracts, \$45,219.50, with interest at 5 per cent. from February 1, 1913, to March 31, 1913, \$559.28.....	45,578 78			
Pay the Estate of the late Hon. W. F. Pipes, \$305.20, with interest at 5 per cent. from October 6, 1905, to March 31, 1913, \$114.18, being for land taken for right-of-way to wharf at Fort Lawrence.....	419 38	2,493,707 53		
Less to Previous Years Expenditure—Proceeds of sale of dwelling house and shed, Moncton, and transfer of bridge, Moncton, to improvements at Mulgrave.....	1,720 00		1913, March 31. By Dominion of Canada.....	2,391,987 53
Amount received for concessions (Ballast wharf property, St. John) granted per terms of Order-in-Council of October 22, 1912.....	100,000 00	101,720 00		97,137,807 17
		97,137,807 17		

E. &amp; O. E.

Moncton, N.B.

S. L. SHANNON,

*Comptroller and Treasurer.*

4 GEORGE V., A. 1914

## No. 2.—INTERCOLONIAL RAILWAY.

Revenue Account.

Year ended March 31st, 1913.

Working expenses.	\$ cts.	\$ cts.	\$ cts.	Earnings.	\$ cts.
Maintenance of Way and Structures .....		2,058,458 08		Passenger earnings	3,438,447 32
Maintenance of Equipment	2,263,809 06			Freight earnings..	8,028,760 13
Add surplus for year transferred to Renewal of Equipment and debited to this account .....	777,863 74	3,041,672 80		Mail and Express earnings .....	470,866 13
				Miscellaneous Earnings. ....	46,409 11
Traffic expenses. ....		230,481 05			
Transportation expenses....		6,378,894 67			
General expenses.....		270,476 09	11,979,982 69		
Balance.....	782,363 74				
Less surplus transferred to Renewal of Equipment Account .....	777,863 74		4,500 00		
			11,984,482 69		11,984,482 69

E. & O. E.,  
MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

## No. 3.—INTERCOLONIAL RAILWAY.

Maintenance of Way and Structures.

Year ended March 31, 1913.

No.		cts.
1.	Superintendence.....	72,740 88
2.	Ballast.....	66,198 85
3.	Ties.....	243,239 11
4.	Rails.....	180,056 97
5.	Other Track Material .....	111,919 32
6.	Roadway and Track .....	738,407 32
7.	Removal of Snow, Sand and Ice.....	95,873 97
9.	Bridges, Trestles and Culverts.....	79,798 20
10.	Over and Under Grade Crossings.....	1,767 68
11.	Grade Crossings, Fences, Cattle Guards and Signs .....	59,427 24
12.	Snow and Sand Fences, and Snow Sheds.....	7,612 14
13.	Signals and Interlocking Plants .....	7,663 03
14.	Telegraph and Telephone Lines.....	1,159 31
16.	Buildings, Fixtures and Grounds.....	327,751 20
17.	Docks and Wharfs.....	14,108 55
18.	Roadway Tools and Supplies .....	22,155 22
22.	Injuries to persons.....	585 96
23.	Stationery and Printing .....	6,130 58
25.	Other Expenses .....	841 33
26.	Maintaining Joint Tracks, Yards and other Facilities—Dr .....	29,227 36
	Cr.	
27.	Maintaining Joint Tracks, Yards and other Facilities—Cr.....	2,066,664 22
		8,206 14
		2,058,458 08

E. & O. E.,  
MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

## SESSIONAL PAPER No. 20

## No. 4.—INTERCOLONIAL RAILWAY.

## Maintenance of Equipment.

Year ended March 31, 1913.

	\$	cts.
No. 28. Superintendence.....	60,892	92
" 29. Steam Locomotives—Repairs.....	788,952	68
" 30. " " —Renewals.....	479,050	54
" 35. Passenger Train Cars—Repairs.....	296,939	26
" 36. " " —Renewals.....	239,525	21
" 38. Freight Train Cars—Repairs.....	655,273	20
" 39. " " —Renewals.....	359,287	99
" 44. Floating Equipment—Repairs.....	18,079	01
" 45. " " —Renewals.....	5	00
" 47. Shop Machinery and Tools.....	49,404	76
" 49. Injuries to Persons.....	1,187	09
" 50. Stationery and Printing.....	10,826	43
" 51. Maintaining Joint Equipment at Terminals. Dr.....	6,478	14
" 52. Other Expenses.....	38,542	86
" 53. Work Equipment—Repairs.....	35,957	71
" 54. " " —Renewals.....	1,270	00
	3,041,672	80

E. & O. E.,  
MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

## No. 5.—INTERCOLONIAL RAILWAY.

## Traffic Expenses.

Year ended March 31, 1913.

	\$	cts.
No. 57. Superintendence.....	66,430	69
" 58. Outside Agencies.....	85,494	16
" 59. Advertising.....	39,780	66
" 60. Stationery and Printing.....	35,036	43
" 61. Traffic Associations.....	2,843	86
" 65. Other Expenses.....	895	25
	\$ 230,481	05

E. & O. E.,  
MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

4 GEORGE V., A. 1914

## No. 6.—INTERCOLONIAL RAILWAY.

## Transportation Expenses.

Year ended 31st March, 1913.

	\$	cts.
No. 66. Superintendence.....	88,448	15
" 67. Despatching trains.....	172,837	82
" 68. Station employees.....	775,314	27
" 69. Weighing and car service associations.....	1,708	19
" 72. Station supplies and expenses.....	107,708	70
" 73. Yardmasters and their clerks.....	44,960	55
" 74. Yard conductors and brakemen.....	191,297	43
" 75. Yard switch and signal tenders.....	15,166	12
" 76. Yard supplies and expenses.....	21,438	00
" 77. Yard enginemen.....	145,710	24
" 78. Enginehouse expenses—yard.....	39,313	93
" 79. Fuel for yard locomotives.....	225,947	51
" 80. Water for yard locomotives.....	13,080	60
" 81. Lubricants for yard locomotives.....	3,360	47
" 82. Other supplies for yard locomotives.....	2,345	45
" 83. Operating joint yards and terminals—Dr.....	123,193	93
" 86. Road enginemen.....	641,478	84
" 87. Enginehouse expenses—road.....	281,490	62
" 88. Fuel for road locomotives.....	1,994,892	16
" 89. Water for road locomotives.....	67,126	04
" 90. Lubricants for road locomotives.....	29,598	90
" 91. Other supplies for road locomotives.....	17,771	75
" 94. Road trainmen.....	875,657	13
" 95. Train supplies and expenses.....	215,078	56
" 96. Interlocking, block and other signals—operation.....	9,709	31
" 97. Crossing flagmen and gatemen.....	15,708	15
" 98. Drawbridge operation.....	3,432	13
" 99. Clearing wrecks.....	28,454	27
" 100. Telegraph and telephone—operation.....	13,476	37
" 101. Operating floating equipment.....	50,737	12
" 103. Stationery and printing.....	63,687	74
" 105. Other expenses.....	40,807	31
" 106. Loss and damage—freight.....	56,927	84
" 107. Loss and damage—baggage.....	606	66
" 108. Damage to property.....	13,637	10
" 109. Damage to stock on right of way.....	5,518	63
" 110. Injuries to persons.....	27,882	84
" 111. Operating joint tracks—Dr.....	12,437	06
	Cr.	\$ 6,438,297 89
" 84. Operating joint yards and terminals—Cr.....		59,403 22
		\$ 6,378,894 67

E. & O. E.,  
MONCTON, N.B.S. L. SHANNON,  
*Comptroller and Treasurer.*

## No. 7.—INTERCOLONIAL RAILWAY.

## General Expenses.

Year ended March 31, 1913.

	\$	cts.
No. 113. Salaries and Expenses of General Officers.....	27,401	38
" 114. Salaries and Expenses of Clerks and Attendants.....	106,711	50
" 115. General Office Supplies and Expenses.....	5,484	52
" 116. Law Expenses.....	17,098	00
" 118. Relief Department Expenses.....	9,400	00
" 119. Pensions.....	80,506	83
" 120. Stationery and Printing.....	18,615	61
" 121. Other Expenses.....	5,258	25
		270,476 09

E. & O. E.,  
MONCTON, N.B.S. L. SHANNON,  
*Comptroller and Treasurer.*

## SESSIONAL PAPER No. 20

## No. 8.—INTERCOLONIAL RAILWAY OF CANADA.

## GENERAL Stores Account. Year ended March 31, 1913.

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.	\$	cts.
To balance, March 31, 1912.....					By issues during year ended March 31, 1913.....	4,349,486	76		
Purchases during year ended March 31, 1913...	4,164,646	10	1,379,710	59	Sales, material, fuel, &c.....	55,641	95		
Charges from other Departments.....	570,473	79			Sales, old material.....	313,189	93		
Labour.....	46,317	73						4,718,318	64
Staff.....	22,328	21			Balance—				
			4,803,765	83	Ordinary stores, including fuel.....	732,255	09		
					Roadway and bridge material.....	732,902	78		
								1,465,157	78
								6,183,476	42

S. L. SHANNON,

*Comptroller and Treasurer.*

C. F. BURNS,

*Auditor of Disbursements.*

## No. 9.—INTERCOLONIAL RAILWAY.

General Balance.—Year ended March 31, 1913.

To	Dr.	cts.	%	cts.	%	By	cts.	%	cts.
Cash.....		43 05				By Dominion of Canada.....	2,573,116 20		
General Stores.....		1,465,157 78				Intercolonial & Prince Edward Island Railways			
Station Agents.....		224,176 61				—Employees Provident Fund.....	346,028 57		
Receiver General—Provident Fund—Account.....		973,542 93				Freight in Transit Account.....	10,106 94		
Auditors Suspense Account.....		80,700 32				Rail Renewal Account.....	228,026 92		
Cash in Transit Account.....		8,388 37				Fire Renewal Account (Buildings, Fixtures and Grounds).....	102,763 17		
Commissary Account.....		22,836 48				Equipment Renewal Account.....	1,389 77		
Expenditures for Road and Equipment—Suspense Account—Campbellton.....		4,800 00							3,262,371 57
Unclaimed Freight.....		677 27				Individuals and Companies Ledger:—			
Expenditures for Road and Equipment—Suspense Account—Surveys and Inspection.....		2,080 28				Amherst Malleable Iron Co.....	40 42		
Expenditures for Road and Equipment—Suspense Account—Point Tupper.....		11,948 06				Atlantic Lumber Co.....	104 17		
Expenditures, Road and Equipment—Suspense Account—Pugwash to Pugwash Harbour.....		206 40				Peersville Ry. & Coal Co.....	216 20		
						A. Belanger.....	251 40		
Individuals and Companies Ledger:—						J. H. Brownell.....	149 72		
Acadia Coal Company.....		28 64				Canadian Express Co.....	5,351 13		
Alabama & Vicksburg Ry.....		5 13				Chatham, Ry.....	07		
Atlantic Coast Line.....		254 37				Chappell Brothers.....	25 00		
Armour Car Lines.....		85 57				Canadian Oil Co's.....	30 14		
H. & A. Allan.....		472 20				J. & A. Culligan.....	10 20		
Atlantic and Lake Superior Ry.....		1,353 67				Colonial Granite Co.....	81 00		
Atlanta, Birmingham and Atlantic Ry.....		336 92				Cornwall and York Cotton Mills Co.....	154 78		
American Refrigerator Transportation Co.....		2 64				Credit Foncier, Canadian.....	113 25		
Atchison, Topeka and Santa Fe Ry.....		182 57				John J. Campbell.....	2,246 37		
Ann Arbor Ry.....		22 39				Coldbrook Realty and Development Co.....	331 45		
Alabama Great Southern Ry.....		77 47				Colonial Coal Co.....	1,238 62		
Armstrong Refrigerator Line.....		9 07				Duls & Co.....	1,172 67		
P. S. Archibald.....		3 46				G. Dumont.....	98 63		
Steamship "Amelia".....		0 70				W. H. Duffy.....	27 00		
Austin Lumber Co.....		272 46				Elmsdale Co.....	288 85		
J. Abrams & Sons.....		129 20				T. E. Fernald & Co.....	1,190 18		
Boston and Maine Ry.....		1,323 06				Finch, Pruytt & Co.....	223 50		
Baltimore and Ohio Ry.....		569 21				Grand Lake Lumber Co.....	383 00		
Boston and Albany Ry.....		14 80				General storekeeper.....	209 72		
Bangor and Arcoctock Ry.....		45 49				H. J. Ganson & Co.....	4,953 16		
Buffalo, Rochester and Pittsburg Ry.....		112 17				L. Goodspeed & Son.....	216 44		
Buffalo and Susquehanna Ry.....		28 02				Abner Gordon.....	161 79		
Bessemer and Lake Erie Ry.....		4 79				General average account.....	987 34		
Bathurst Lumber Co.....		91 60				Halifax station Labour.....	416 68		
Brown Machine Co.....		353 64				Charles and Davidson Hill.....	359 81		
Caracquet Ry.....		14,277 57				T. A. Hurley.....	168 09		
						Havelock Mineral Springs Company.....	303 72		
						Imperial Oil Co.....	152 88		

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Central Vermont Ry.	764 26	Imperial Oil Co. (siding account, New Glasgow)	340 43
Coal and Coke Ry.	29 69	Imperial Oil Co. (siding account, Campbellton)	368 39
Cumberland Ry. and Coal Co.	120 63	J. A. Kirkpatrick	248 50
Canadian Iron Corporation.	3 60	LoB. Drury Lockhart	343 30
Canadian Northern Ry. System.	3,367 20	W. S. Luggie & Co.	187 77
Cincinnati, Hamilton and Dayton Ry.	83 41	Joseph Lecours	112 55
Cleveland, Cincinnati, Chicago and St. Louis Ry.	464 89	J. A. Likely	1,022 64
Canada Atlantic and Plant Steamship Line	0 36	Thomas Lahey	99 07
Chicago, Milwaukee and St. Paul Ry.	222 26	La Cie Manufacture de Montagny	100 59
Chicago, St. Paul, Minneapolis & Omaha Ry.	52 33	La Cie Industrielle de Rimouski	489 42
Cincinnati Northern Ry.	3 17	P. Lyall & Sons Construction Co.	343 07
Chicago and North Western Ry.	199 57	Nap. Mercier	25 50
Canadian Pacific Ry. Tel. Co.	720 13	By William H. Miller	287 00
G. S. Campbell & Co.	11 56	Miramichi Lumber Co.	177 50
Canadian Ry. News Co.	28 50	F. M. Murray	158 27
Chicago & Alton Ry.	85 59	Mapleleaf Lumber Co.	489 03
Cincinnati, New Orleans & Texas Pacific Ry.	165 08	D. H. McKay	60 07
Chicago, Burlington & Quincy Ry.	201 68	W. A. McKay & Co.	138 00
Chicago Refrigerator Despatch Line.	8 02	McLean Milling Co.	577 08
Central Ry. of New Jersey	177 17	Dan McNeil & Sons	513 97
Chesapeake & Ohio Ry.	174 01	H. E. McArthur	223 10
Choctaw, Oklahoma & Gulf Ry.	11 55	Hugh D. McKenzie Co.	6 76
Colorado Southern Ry.	9 69	J. M. McElrath	364 24
Cudahy Refrigerator Line	1 43	New Brunswick Telephone Co.	14 62
Chicago & Eastern Illinois Ry.	79 62	Nova Scotia Carriage & Motor Car Co.	215 61
Canadian Locomotive Co.	132 53	Portland Rolling Mills	163 15
City of Montreal	112 50	James R. Porter	5 00
Central of Ontario Ry.	9 09	Pratt Brothers (Incorporated)	139 15
Chicago, New York & Boston Refrigerator Ry.	0 21	Quebec Construction Co.	51 44
Chicago, Indianapolis & Louisville Ry.	231 49	Rhodes, Curry & Co.	22 54
Chicago, Cincinnati & Louisville Ry.	1 26	Reed Co., (Limited)	274 65
Chicago, Indiana & Southern Ry.	47 23	Sessequen Brothers	2 73
Colebester Coal & Ry. Co.	369 35	John Simon	6,801 12
Cumberland Valley Ry.	0 46	Savoie & Co.	426 62
Chicago Rock Island & Pacific Ry.	611 67	Fnoch Steeves	231 25
Chicago Great Western Ry.	154 82	St. John Station Labour	144 14
J. H. Corbett	163 67	James Stevenson	159 82
Chicago, Peoria & St. Louis Ry.	13 84	Charles F. Stephen	78 50
Cold Blast Transportation Company	9 07	Steel Co., of Canada	3,280 17
Colorado Southern, New Orleans & Pacific Ry.	9 07	Stephen Brothers	293 14
Copper Range Ry.	45 13	Swift & Co., (Siding account)	265 30
Central of Georgia Ry.	31 80	Edward Sinclair Lumber Company	477 80
Frank A. Cutting Co.	3 30	J. B. Snowball Co.	68 04
Charleston & Western Carolina Ry.	4 04	B. L. Tucker	184 69
Canada & Gulf Terminal Ry.	5,043 78	Town of New Glasgow	131 00
Cudahy & Milwaukee Refrigerator Line	6 06	S. F. Vaughan & Co.	891 00
Corwall & Lebanon Ry.	0 35	Alex. Watson	356 00
Canada Car & Foundry Co.	10,700 07	York & Sunbury Milling Company	132 45
		Carried forward	55,234 77
	44,404 03		3,317,605 94



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Gulf Colorado & Santa Fe Ry.....	11 55	New York, New Haven & Hartford Ry.....	705 89
Great Northern Ry Line.....	153 24	Northern New Brunswick & Seaboard Ry.....	79 27
Great Western Ry.....	1 42	Pennsylvania R.R.....	29 35
Graham Southern and Florida Ry.....	58 43	Pere Marquette Ry.....	49 61
Graham & Co.....	38 75	Pittsburg & Lake Erie Ry.....	1 63
Grand Trunk Ry—Suspense.....	38 57	Quebec Central Ry.....	75 83
Grand Rapids & Indiana Ry.....	6 65	Raymond & Whitcombe Co.....	1 95
Georgia Ry.....	28 07	Southern Pacific Co. (Pacific System).....	72 83
Gulf & Ship Island Ry.....	25 25	Salisbury & Albert Ry.....	20 92
Gulf, Texas & Western Ry.....	117,965 22	Temiscouata Ry.....	72 37
Halifax & South Western Ry.....	251 80	Teniskaming & Northern Ontario Ry.....	454 67
Hampton & St. Martins Ry.....	54 76	Wabash Ry.....	259 73
Hooking Valley Ry.....	1 46	Car Service Ledger—	33,081 76
Houston & Texas Central Ry.....	81 78	Aberdeen & Rockfish Ry.....	30
Hoods Quarry Co.....	249 05	Arkansas South Eastern Ry.....	1 40
Hone & Rivet.....	137 45	Coudersport & Port Alleghey Ry.....	22 05
Inverness Ry. & Coal Co.....	20 80	Cumberland & Pennsylvania Ry.....	2 45
Intercolonial Coal & Mining Co.....	889 99	Grafton & Upton Ry.....	5 80
Illinois Central Ry.....	51 01	Georges Valley Ry.....	6 05
International & Great Northern Ry.....	6 00	Greenville, Spartanburg & Anderson Ry.....	1 80
International Engineering Works.....	6 62	Kanawaba & West Virginia Ry.....	1 90
A. G. Jones & Co.....	6,968 18	Kansas Southern & Gulf Ry.....	4 25
Kent Northern Ry.....	1 62	Paris & Mount Pleasant Ry.....	35
Kanawaba & Michigan Ry.....	68 90	Thousand Islands Ry.....	20
Kansas City Southern Ry.....	38 93	Tennessee Central Ry.....	46 45
Kansas City, Mexico & Orient Ry.....	8,048 71	Union Pacific Ry.....	
D. G. Kirk.....	2 15	Rents Ledger—	
Lotbiniere & Megantic Ry.....	21,370 37	Dos. LeBlanc.....	20
Londonderry Iron & Mining Co.....	813 73	Moncton Tramways, Electricity & Gas Co.....	1 00
Lehigh Valley Ry.....	3 47	Calder Fraser & Co.....	1 00
Louisiana Western Ry.....	143 13	Levi Thompson.....	1 00
Louisville & Nashville Ry.....	405 24	Emile Patard.....	1 00
Lake Shore & Michigan Southern Ry.....	11 55	Douglas Hannah.....	98
Long Island Ry.....	35 48	T. B. Cochran.....	1 48
Lake Erie & Western Ry.....	96 10	Moncton Tramways, Electricity & Gas Co.....	1 00
R. S. Lowe.....	3 25	Dominion Express Co.....	17 75
Lotbiniere Lumber Co.....	2 23	George Lovett.....	1 50
Libby, McNeil & Libby.....	4 00	Rhodes Curry & Co.....	1 00
Louisiana Ry. & Nav. Co.....	3,196 80	Carried forward.....	3,356,468 70
Loss & Damage Freight—Suspense Account.....	48		
Louisville, Henderson & St. Louis Ry.....	501 33		
Louisville, Henderson & St. Louis Ry.....	450 78		
Michigan Central Ry.....	119 10		
Maine Central Ry.....	11 45		
John Murphy.....	756 09		
Montmagny Light & Power Co.....	1,978 47		
Thos. Malcolm.....	186 64		
Missouri Pacific Ry.....	70 85		
Minneapolis St. Paul & Sault Ste. Marie Ry.....			
Carried forward.....	2,794,557 65		
	281,247 52		





No. 9.—INTERCOLONIAL RAILWAY.—Continued.  
GENERAL BALANCE. Year ended March 31, 1913.—Continued.

Dr.	\$	cts.	\$	cts.	Cr.	\$	cts.
Brought forward.....	462,752	97	2,794,557	55	Brought forward.....	3,356,468	70
Southern Pacific Ry.....	185	24					
Southern Ry.....	392	00					
St. Lawrence & Adirondack Ry.....	0	08					
Seaboard Air Line.....	65	42					
St. Louis & San Francisco Ry.....	208	94					
San Pedro, Los Angeles & Salt Lake Ry.....	7	15					
St. Louis Southwestern Ry.....	101	66					
St. Joseph & Grand Island Ry.....	4	30					
St. Monique Station.....	16	00					
Sanderson Manufacturing Co.....	47	10					
Santa Fe Refrigerator Despatch.....	8	44					
Sussex Station.....	25	00					
San Antonio & Aransas Pass Ry.....	3	12					
Sandusky Grain Co.....	1	30					
St. Paul & Kansas City Short Line.....	0	99					
C. E. Smith.....	386	34					
Susquehanna & New York Railway.....	1	41					
Susquehanna Ry.....	87	61					
Texas & Pacific Ry.....	62	98					
Toronto, Hamilton & Buffalo Ry.....	10	52					
Trois Pistoles Pulp & Paper Co.....	73	82					
Transcontinental Ry. Commissioners.....	2,594	10					
Toledo, St. Louis & Western Ry.....	63	71					
Toledo & Ohio Central Ry.....	36	01					
Toledo, Peoria & Western Ry.....	9	37					
Texas & New Orleans Ry.....	7	33					
D. Trimblay.....	123	29					
F. M. Tweedie.....	19	90					
Toronto Construction Co.....	429	75					
Teniskaming & Northern Ontario Ry.....	1	00					
Trinity & Brazos Valley Ry.....	24	76					
Tremont & Gulf Ry.....	17	51					
Terminal Ry Association of St. Louis.....	8	54					
Three Rivers Steamship Co.....	52	23					
Town of St. Leonard Jet.....	216	90					
Vandalia Ry.....	15	65					
Union Refrigerator Transit Co.....	7	79					
Vicksburg, Shreveport & Pacific Ry.....	6	43					
Union Pacific Ry.....	40	34					
Union Ry.....	44						
Virginian Ry.....	7	51					

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Virginia & South Western Ry.....	1 63		
Uranium Steamship Co.....	111 05		
Walash Ry.....	180 83		
Western Union Telegraph Co.....	2,717 44		
A. N. Whitman & Son.....	150 00		
E. A. Wallberg.....	2 97		
Wallace Stone Quarry Co.....	71 46		
Wilson & Son.....	8 28		
Western Maryland Ry.....	17 90		
Wisconsin Central Ry.....	21 80		
Wheeling & Lake Erie Ry.....	30 85		
Western Refrigerator Despatch	79		
Wyoming & North Western Ry.....	1 19		
West Jersey & Seashore Ry.....	1 19		
Western Ry. of Alabama.....	13 91		
White-City Refrigerator Despatch	3 67		
York & Carleton Ry.....	33 60		
		471,432 11	
Individuals & Companies Ledger Suspense—			
Thos. Bell & Co.....	1 80		
Dominion Atlantic Ry.....	49 57		
Halifax & South Western Ry.....	82 54		
Thos. Malcolm.....	17 58		
National Transcontinental Ry. Commissioners	318 30		
Nova Scotia Steel and Coal Co.....	3 93		
Prince Edward Island Ry.....	0 01		
Quebec Contracting Co.....	3 58		
		477 31	
T <sub>0</sub> Traffic Ledger—			
H. & A. Allen.....	4,396 63		
Acadia Coal Co.....	11 70		
Canadian Northern Ry.....	6,191 11		
Cape Breton Ry.....	34 98		
Cumberland Ry. & Coal Co.....	617 57		
Central Ontario Ry.....	98 72		
Dominion Steamship Co.....	114 69		
Dept. of Marine & Fisheries.....	25 38		
Dominion Coal Co.....	20,374 66		
Dept. of Labor & Commerce, U.S.A.....	15 25		
T. A. S. DeWolfe & Son.....	5 00		
Dominion Iron & Steel Co.....	50 92		
Furness Whithy & Co.....	21 15		
Grand Trunk Ry.....	24,749 92		
General Transatlantic Co.....	72 90		
A. G. Jones & Co.....	9 50		
MacKay Brothers.....	0 48		
		3,266,466 97	
Carried forward.....			3,356,468 70







3 75	S. W. White
1 00	W. K. Graham
1 00	C. E. McGready
1 00	Mrs. Agnes Weir
5 00	J. Titus & Co.
2 00	Thos. Sharp
1 00	A. B. Copp
3 00	Robert O'Leary
1 00	Loggie Brothers
3 00	Henry O'Leary
40 00	George Clouthier
1 00	Thos. Robinson
3 00	Mrs. Desmond
1 00	Estate E. J. Smith
3 00	Estate Wm. J. Williams
3 00	Malcolm Patterson
0 25	James Shaumon
2 00	Mrs. Stubbs
0 25	J. Cameron
1 00	John R. Stewart
8 00	William Young
1 00	Frost & Wood
3 00	Charles Richards
1 00	Spencer Brothers & Turner
2 00	Estate D. S. Harper
1 00	Estate Patrick McCourt
0 25	Adam Mahar
0 25	George Mann
0 25	Benjamin Smith
1 00	J. M. Dube
2 00	Price Brothers
4 00	James E. Kelly
1 00	Dr. E. O. Steeves
10 00	S. H. White & Co.
200 00	King Brothers
1 00	John Roach
11 25	N. Pushie
7 37	N. Pushie
15 00	M. McLean
1 00	Geo. Lightie
1 00	James A. Kirkpatrick
15 00	John C. Cass
1 00	G. & G. Flewelling
1 00	Spencer Brothers & Turner
1 00	A. & R. Loggie
1 00	I. Matheson & Co.
1 00	Alex Belanger
10 00	George Stone
4,023 54	Carried forward
3,348,850 64	
3,356,468 70	Carried forward





4 GEORGE V., A. 1914

No. 9.—INTERCOLONIAL RAILWAY.—Continued.  
 GENERAL BALANCE. Year ended March 31, 1913.—Concluded.

Dr.		Cr.	
	\$ cts.		\$ cts.
Brought forward.....	3,353,233 14	Brought forward.....	3,356,468 70
To Advances:—			
H. M. Stevens.....	5 06		
Sir G. Falconbridge.....	1,500 00		
A. R. Smith.....	20 00		
Hon. J. Bureau.....	150 00		
T. P. Owens.....	550 00		
R. A. Lawlor.....	250 00		
L. G. Demers.....	200 00		
A. M. McLellan.....	16 65		
Adolphe Bazin.....	23 85		
T. W. Butler.....	500 00		
	3,215 56		
	3,356,468 70		

E. &amp; O.E.,

MONCTON, N.B.

S. L. SHANNON,

Comptroller &amp; Treasurer.

## SESSIONAL PAPER No. 20

## No. 10.—INTERCOLONIAL RAILWAY.

Year ended March 31, 1913. STATEMENT of Receipts and Expenses.

Expenses.	Receipts.		
		\$	cts.
Maintenance of way and structures.....	Received from Parliamentary appropriations on account of Inter-		
Maintenance of equipment.....	colonial Railway Working Expenses through the Department of		
Traffic expenses.....	Railways and Canals.....	1,848,458	08
Transportation expenses.....	Balance at credit of Equipment Renewal Account at April 1, 1912	3,041,672	80
General expenses.....	Cash received for sale of old rolling stock.....	290,481	05
Amount expended for renewal of rolling stock.....	Amount paid for rolling stock and charged Equipment Renewal	6,378,894	67
Amount expended for renewal of buildings, &c.....	Account.....	270,476	09
Amount expended for renewals of rails, &c.....	Amount of surplus in Road Stock account transferred to Equip-	933,751	80
Balance:—	ment Renewal Account.....	13,506	23
Equipment renewal account.....	Balance at credit of Rail Renewal Account, at April 1, 1912..	81,261	26
Rail renewal account.....	Unclaimed wages credited to Rail Renewal Account.....		
Fire Renewal Account.....	Balance at credit of Fire Renewal Account at April 1, 1912.....		
		1,339	77
		228,926	52
		102,763	17
		333,029	46
		16,132,131	44
		11,979,982	69
		765,950	44
		28,757	83
		8,043	89
		132,339	41
		160,784	80
		2	98
		56,269	40
		18,132,131	44

MONCTON, N.B.  
E. & O.F.

Comptroller & Treasurer.  
S. L. SHANNON,

## No. 11.—INTERCOLONIAL RAILWAY.

## Equipment Renewal Account.

On the 1st April, 1912, there was a balance to the credit of the Equipment Renewal Account of.....		\$ 765,950 44
During the year ended 31st March, 1913, there was credited to the Equipment Renewal Account on account of charges to working expenses.....		1,077,863 74
Cash received for sale of old rolling stock.....		28,757 83
Amount paid for rolling stock charged Equipment Renewal Account and subsequently transferred to rolling stock capital.....		8,043 89
Surplus in road stock.....		132,339 41
		<hr/> 2 012,955 31
There has been charged during the year against the above amount :—		
24 Locomotives were paid for in full.....	\$ 509,734 47	
On account of four more locomotives a progress estimate was paid of Leaving a balance due on these four locomotives of \$22,780 which was paid during the fiscal year 1913-14.....	44,220 00	
A balance was also paid in the year ended 31st March, 1913, on a final estimate for three locomotives delivered during previous year of Cost of inspection of locomotives paid during the year ended 31st March, 1913.....	2,000 00	
698 box cars.....	2,078 18	
100 platform cars.....	794,657 60	
35 refrigerator cars.....	90,625 00	
80 steel coal cars.....	65,570 00	
1 tank car.....	122,695 00	
10 stock cars.....	2,695 00	
Cost of inspection of these cars paid during the year ended 31st March, 1913.....	10,950 00	
Air brake material supplied contractors for the construction of the above mentioned cars, and cars now under construction.....	3,811 91	
Balance of cost of one refrigerator car constructed in Moncton shops during the previous year.....	77,154 71	
Balance of cost of 35 platform cars constructed in Moncton shops during the previous year.....	516 64	
Amount expended in Moncton shops on 10 vans under construction	9,293 65	
Material supplied for 50 box cars constructed in Moncton shops during the previous year.....	9,966 65	
Material and labour supplied for 50 box cars under construction in Moncton shops.....	25,376 89	
1 snow plow.....	27,030 61	
1 dining car.....	4,910 00	
2 sleeping cars.....	25,050 00	
2 postal cars.....	54,800 00	
5 first class cars.....	13,492 77	
Balance paid for 3 first class cars delivered during previous year.....	77,750 00	
Freight charges on cars delivered during the previous year and returned for alteration.....	800 00	
Material supplied for 3 baggage cars now under construction, in the year 1913-14.....	111 60	
Amount transferred from capital account, being difference in cost of 1 dining car and 2 sleeping cars and the amounts estimated in capital account vote for same.....	360 00	
Amount paid for silverware for 1 dining car.....	9,752 30	
Cost of inspection of these cars during the year ended 31st March, 1913.....	1,059 86	
Balance of cost of 1 combined passenger and baggage car constructed in Moncton shops.....	2,579 11	
Balance of cost of 1 milk car constructed in Moncton shops.....	553 82	
Amount expended for changing 3 motor cars to first class cars.....	91 20	
Amount expended on 3 colonist cars under construction in Moncton shops.....	915 73	
Air brake material supplied from Moncton shops.....	14,812 42	
	1,200 42	
		<hr/> 2,011,615 54
Leaving a credit balance to the credit of Equipment Renewal Account on the 31st March, 1913.....		<hr/> 1,339 77

E. & O.E.,  
MONCTON, N.B.

S. L. SHANNON,  
Comptroller and Treasurer.

SESSIONAL PAPER No. 20

## No. 12.—INTERCOLONIAL RAILWAY.

## Rail Renewal Account.

On April 1, 1912, there was a balance to the credit of the Rail Renewal account of .....	\$160,784 80
During the year ended March 31, 1913, there was credited to Rail Renewal Account on account of charges to working expenses. ....	150,000 00
Unclaimed wages credited to Rail Renewal Account.....	2 98
	<hr/>
There has been charged during the year against the above amount .....	\$310,787 78
	<hr/>
Leaving a credit balance to the credit of Rail Renewal Account on March 31, 1913 .....	81,861 26
	<hr/>
	\$228,926 52

E. & O. E.,  
 MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

## No. 13.—INTERCOLONIAL RAILWAY.

## Fire Renewal Account.

On April 1, 1912, there was a balance to the credit of Fire Renewal Account of .....	\$ 56,269 40
During the year ended March 31, 1913, there was credited to Fire Renewal Account an account of charges to working expenses. ....	60,000 00
	<hr/>
There has been charged during the year against the above amount .....	\$116,269 40
	<hr/>
Leaving a credit balance to the credit of Fire Renewal Account on March 31, 1913 .....	13,506 23
	<hr/>
	\$102,763 17

E. & O. E.,  
 MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

No. 14.—INTERCOLONIAL RAILWAY.  
Statement of Cash Received, Year ended March 31, 1913.

To Balance on hand at April 1, 1912.....	\$ 2 33	By amounts deposited to the credit of the Honourable Receiver General of Canada during the year ended March 31, 1913.....	\$14,066,298 36
Amounts received during the year ended March 31, 1913, and credited as follows :—		Leaving a balance on hand on March 31, 1913. Made up as follows :—	43 05
Station agents.....	\$9,310,760 79	Vouchers.....	\$ 41 92
Traffic ledger.....	2,853,393 89	Discount.....	47
Car service ledger.....	242,513 87	Change.....	66
Individuals and companies ledger.....	1,608,350 22		
Rents ledger.....	20,486 99		
General ledger.....	30,853 32		
	14,066,339 08		
	14,066,341 41		14,066,341 41

E. & O. E.,  
MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

## INTERCOLONIAL RAILWAY.

STATEMENT of Averages, year ending March 31, 1913.

Mileage of railway .....	1,468.15
Engine mileage .....	10,279.369
Total train mileage .....	8,147,819
Total car mileage .....	115,787,028
Ratio of earnings to gross earnings—	Per Cent.
Revenue from transportation .....	99.16
Revenue from operations other than transportation.....	.84
Gross earnings per mile of railway.....dollars. .	8,162.98
“ engine mile .....	1.17
“ train mile .....	1.47
“ car mile .....	10.35
Ratio of expenses to gross earnings—	Per Cent.
Maintenance of Way and Structures .....	17.17
Maintenance of equipment .....	25.38
Traffic expenses .....	1.92
Transportation Expenses.....	53.23
General expenses .....	2.26
Expenses per train mile—	
Maintenance of way and structures.....cents.	25.26
Maintenance of equipment ....	37.33
Traffic expenses .....	2.83
Transportation expenses .....	78.29
General expenses .....	3.32
Total per train mile.....	147.03
Expenses per mile of railway—	
Maintenance of way and structures .....dollars.	1,402.07
Maintenance of equipment .....	2,071.77
Traffic expenses .....	156.99
Transportation expenses .....	4,344.85
General expenses .....	184.23
Total per mile of railway .....	8,159.91
Locomotive and car repairs per locomotive and car—	
Locomotives .....	2,062.62
Passenger cars .....	623.93
Freight cars .....	52.85

C. F. BURNS,  
*Auditor of Disbursements.*

S. L. SHANNON,  
*Comptroller and Treasurer.*

## No. 1.—WINDSOR BRANCH RAILWAY.

Revenue Account, Year ended March 31, 1913.

Expenditure.	\$ cts.	Earnings.	\$ cts.
Maintenance of way and structures.....	29,970 62	Passenger earnings.....	18,622 99
Balance .....	38,276 08	Freight earnings.....	48,471 87
		Mail earnings.....	1,151 84
	68,246 70		68,246 70

E & O. E.,  
MONCTON, N.B.

S. L. SHANNON,  
*Comptroller and Treasurer.*

## No. 2.—WINDSOR BRANCH RAILWAY.

Maintenance of Way and Structures, Year ended March 31, 1913.

	\$ cts.
Superintendence .....	1,861 42
Ballast.....	285 10
Ties .....	4,789 09
Rails .....	2,659 41
Other track material.....	2,205 33
Roadway and track.....	11,110 73
Removal of snow, sand and ice .....	312 00
Bridges, trestles and culverts.....	1,222 50
Grade crossings, fences, cattle guards and signs.....	1,482 40
Signals and interlocking plants.....	2 89
Buildings, fixtures and grounds.....	3,680 95
Roadway, tools and supplies.....	201 99
Stationery.....	19 59
Other expenses.....	137 22
	29,970 62

E. and O. E.,  
MONCTON, N.B.

S. L. SHANNON,  
*Comptroller & Treasurer.*

SESSIONAL PAPER No. 20

## No. 3.—WINDSOR BRANCH RAILWAY.

GENERAL Balance. Year ended March 31, 1913.

Dr.	\$ cts.	Cr.	\$ cts.
To stores department . . . . .	8,331 09	By Dominion account . . . . .	8,331 09

E. and O. E.,  
MONCTON, N.B.S. L. SHANNON,  
*Comptroller and Treasurer.*

## No. 4.—WINDSOR BRANCH RAILWAY.

Months.	Passenger Earnings.	Freight Earnings.	Mail Earnings.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1912—				
April.....	1,451 09	2,686 82	95 68	4,233 59
May.....	1,124 17	2,503 95	95 68	3,723 80
June.....	1,606 80	2,250 28	95 68	3,952 76
July.....	1,885 34	2,511 27	96 91	4,493 52
August.....	2,372 07	2,525 69	96 91	4,994 67
September.....	2,731 32	5,037 10	96 90	7,865 32
October.....	2,014 84	7,776 39	96 91	9,888 14
November.....	790 62	6,248 11	96 90	7,135 63
December.....	1,829 60	4,110 19	96 91	6,056 70
1913—				
January.....	892 79	4,645 06	94 45	5,632 30
February.....	743 40	4,237 51	94 45	5,075 36
March.....	1,180 95	3,939 50	94 46	5,214 91
	18,622 99	48,471 87	1,151 84	68,246 70

E. and O. E.,  
MONCTON, N.B.S. L. SHANNON,  
*Comptroller and Treasurer.*

4 GEORGE V., A. 1914

## INTERCOLONIAL

## STATEMENT of Casualties for

Date.	Time of Day.	No. of Train	Description of train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1912.							
April 9	14:50		Shunter.....	J. Doiron. ....	G. Lutes. ....	131	Sayabec Yard.....
" 13	19:10	Special.	Freight. ....	W. Brownrigg. ....	J. Jones. ....	1094	Two miles west of Riversdale.
" 15	19:00	72	G.T.R. ....	A. McLean. ....	H. Taylor. ....	2524	Near St. Romauld Sta.
" 16	13:40	Special.	Freight. ....	E. Mitchell. ....	A. Jarest. ....	92	Drummondville Bridge.
" 17	19:12		Shunter.....		A. Probert. ....	803	Stellarton Yard....
" 22	13:30	Special.	Freight. ....	J. W. Coles. ....	W. Gross. ....	154	Amherst Yard. .
" 27	5:00		Shunter .....		T. W. Henry. ....	107	Campbellton Sta. .
" 28	20:10	Special.	Immigrant..	E. Johnson. ....	L. Starrett. ....	313	Main Street Crossing, Amherst
May 2	16:50						Truro.
" 2	17:20	224	Mixed.....	J. J. Fraser. ....	R. L. Smith. ....	1074	Near Bridgeville Station.
" 7	5:50		Shunter .....		C. Tobin. ....	57	Sydney Yard.....
" 7	8:00		" .....		C. Coleman. ....	821	Richmond Yard....
" 7	13:15				L. Dutil. ....	443	Chaudiere Curve...
" 8	19:55	12	Freight. ....	G. L. Nixon. ....	W. Gunning. ....	17	Cemetery Crossing, near St. John.
" 10	16:30		Shunter .....		W. Atkinson. ....	1012	North Sydney .....
" 20	7:00		" .....	J. E. Rioux. ....	J. Albert. ....	99	Montmagny .....
" 25		146	Passenger ..	N. St. Pierre. ....	Jas. Houston. ....	606	Near St. Lambert..
" 28	10:40	304	Mixed .....	R. Henry. ....	J. Cameron. ....	1003	Near Blackville....
" 28	7:34	150	Passenger ..	J. Rioux. ....	J. Mills. ....	434	St. Romuald. ....
" 28	19:42	19	" .....	J. Martin. ....	J. Collison. ....	645	Lorways Crossings, Sydney.
June 9	23:25						Cashins Cut.....
" 11	5:30						Near Main Street, Amherst.
" 11	6:20		Shunter ....	C. Fournier. ....	A. J. McDonald. ....		Kempt .....
June 19	15:10		Shunter ....	R. G. Duff. ....	C. Cool. ....	119	Bathurst.....
" 21	11:40	Freight. ....	Special..	S. McPherson. ....	L. McLean. ....	1011	Rory's Siding.....
" 22	10:10	34	Passenger..	T. W. Johnson. ....	J. W. Nairn. ....	418	Near Oxford.....
" 22	13:32	3	G.T.R. Pass.	H. Gendron. ....	F. Johnson. ....	2202	¼ mile w. of Levis..
" 25	7:03	19	Passenger..	J. Gillespie. ....	J. Clarke. ....	402	Young St. crossing, Halifax.
" 29	21:50	419	" .....	R. H. Wilkms. ....	W. Atkinson. ....	1012	Near Sydney Mines
July 6	13:33	63	" .....	C. D. Phillips. ....	W. Levitt. ....	1063	Near Richmond ...
" 10	13:00	34	" .....	John Berry. ....	Jas. Clarke. ....	406	Grand Lake .....

## SESSIONAL PAPER No. 20

## RAILWAY—Continued.

the Year ended March 31, 1913.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
J. B. Sirois.....	Brakeman.....	Got hand caught while coupling cars.	Fingers smashed..	
A. G. McKenzie....	".....	Cars left track.....	Slightly injured...	
J. Gerrier.....	Fireman.....		Fatal. "	Accidental.
Damase Roberge....	Neither.....	Struck by train while walking on track.	Fatal. ....	"
Joseph Tessier.....	".....	While walking on track under the influence of liquor was struck by train.	Fatal. ....	"
Mrs. Mary A. Gillis..	Car Cleaner.....	Working inside of car which was struck by train.	Badly shaken up..	
Andrew Downey....	Neither.....	Struck by train while walking on track.	Cut about head...	
A. Murphy.....	Yardman.....	Caught while coupling cars..	Slightly injured...	
Albert Collins.....	Passenger.....	Jumped from train.....	Arm badly crushed	
John Finlayson....	Carpenter.....	Coupler fell on hand.....	Hand injured.....	
Daniel Thompson...	Neither.....	While driving over crossing struck by train.	Slightly injured...	
J. McPhee.....	Brakeman.....	Fell off engine.....	Cut about head...	
William Moore.....	".....	Fell between cars.....	Both legs cut off..	
Jacques T. Bourasse.	Clerk.....	While attempting to get on engine fell under wheels.	Fatal.....	"
John Hughes.....	Neither.....	Attempted to board train in motion and fell beneath cars.	Fatal.....	Ry exonerated.
John Andrews.....	".....	Knocked from car which was struck by engine.	Badly shaken up..	
J. P. Dionne.....	Brakeman.....	Jumped from cars.....	Leg broken.....	
Joseph Marcotte....	Passenger.....	Fell from train while under influence of liquor.	Badly shaken up..	
D. Hanson.....	Brakeman.....	Fell from car.....	Slightly injured...	
Emile Richard.....	Fireman.....	While leaning out of cab of engine was struck by mail catcher.	Injured about head	
Stephen Fulton....	Neither.....	Attempting to get on moving train.	Slightly injured...	
Dan A. Nicholson....	".....	Remains found on track....	Fatal.....	"
Percy Cook.....	".....	Supposed to have been struck by train.	".....	Accidental.
Arsene Gauthier....	Brakeman.....	While coupling cars got hand caught.	Hand injured.....	
William Payne.....	Brakeman.....	Got hand caught while coupling cars.	Hand jammed.....	
W. S. McLeod.....	".....	Got foot caught while coupling cars.	Foot badly crushed.	
Harold Betts.....	Neither.....	Supposed to have been struck by train.	Fatal.....	No inquest.
Joseph Bacon.....	".....	Struck by train while walking on track.	".....	Accidental.
Jas. McNally.....	".....	Struck by train while attempting to cross track.	Badly injured.	
Peter Père.....	".....	Struck by train while walking along track.	Fatal.....	No blame attached to employees.
Gerald Curren.....	".....	Struck by train on crossing.	Seriously injured.	
Jas. Clarke.....	Engineman.....	Train jumped track.....	Fatal.....	Railway exonerated from blame.
Peter McGill.....	Fireman.....	".....	".....	
Jas. M. Irwin.....	Tramp.....	".....	".....	
A. McKim.....	Baggagemaster....	".....	Arm broken.	
W. C. Johnson.....	Express messenger..	".....	Slightly injured.	

4 GEORGE V., A. 1914

## INTERCOLONIAL

## STATEMENT of Casualties for

Date.	Time of Day.	No. of Train	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1912.							
July 10	16:30		Shunter		H. Comeau	1024	Ballast Wharf, Halifax.
" 12	16:45		"		J. Scott	817	Riv. du Loup yard.
" 15	15:10	64	Passenger	J. D. McDonald	J. McLellan	1083	Young St. crossing, Halifax.
" 26	14:35	44	Way-freight	A. LeBel	A. Allard	641	Sacré Cœur
		Special.	Freight	H. LeBel	N. Therriault	617	
					L. Boulenger	604	
" 26	22:40	9	Passenger	J. D. McDonald	D. Youlds	634	Truro
Aug. 3	11:00		Special	T. G. Stratton	J. J. Witzell	71	Moncton
" 5			Way-freight	F. Dixon	D. McQuarrie	6	Dalhousie Jct.
" 6	6:50		Special	C. Dixon	A. Chapman	73	Newcastle yard
" 7	12:35		"	J. Boyle	J. King	122	West of Harlaka Jct
Aug. 10	3:30						Norton
" 15	8:00		Shunter				Ste. Flavie Yard
" 15	22:00						Newcastle
" 16	20:46	200	Passenger	F. Côté	J. Cloutier	413	Ste. Hyacinthe
" 17	14:33	190	Passenger	R. Hunter	W. Cross	438	Lutz St., Moncton.
" 17	11:00	34	Passenger	J. Bouthillette	Geo. Findlay	432	Drummondville
" 19	20:07	68	Passenger	C. D. Phillips	H. R. Hale	1083	Richmond
" 20	18:10	Special	Way-freight	D. Heins	T. Townsend	71	Bathurst
" 20	18:00		Work	Jos. Ahearn	J. McEachern	111	Beresford
" 22	16:22	3	Passenger	J. R. McManus	Wm. Furze	635	Petitcodiac

## SESSIONAL PAPER No. 20

## RAILWAY—Continued.

the Year ended March 31, 1913.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
W. A. Kinnie.....	Traveller.....	Train jumped track.....	Arm broken and hand badly crush'd and bruised about body.	
Thos. Keith .....	Mail clerk.....	" .....	Bruised about body.	
Chas. LeBel .....	News agent.....	" .....	Ankle sprain'd	
John Berry.....	Conductor.....	" .....	Slightly inj'r'd	
Walter Campbell.....	Brakeman .....	Fell from footboard of engine...	Leg injured.	
Wm. Beake.....	Passenger .....	Attempted to get on moving train.	Left foot badly crushed.	
Ern. W. Brown.....	Neither. ....	Struck by train at crossing.....	Fatal .....	No inquest.
Louis Beljile.....	Passenger .....	Freight train pitched into rear of No. 44 train	" .....	Negligence of employees of special train.
Louis Benville.....	Brakeman .....	" .....	" .....	
Ferd. Rouleau.....	" .....	" .....	Badly injured.	
E. Côté.....	" .....	" .....	Badly shaken up.	
Alfred LeBel .....	Conductor .....	" .....	Badly shaken up.	
Omer D'Anjou.....	Passenger .....	" .....	Slightly inj'r'd	
Wm. Dennis.....	" .....	Train collided with cars.....	Slightly shaken up.	
Vernon C. Trites.....	Brakeman .....	While coupling engine to train..	Hand jammed.	
C. G. Scurr.....	" .....	Fell while unloading freight....	Badly shaken up.	
J. McDermott.....	Fireman .....	Collision. ....	Injured about face and back	
G. Baker.....	Neither.....	Supposed to have been struck by some train.	Fatal .....	Accidental.
Fred McKinnon.....	Baggagemaster.....	Supposed to have been struck by some train.....	Fatal .....	Accidental.
Albert Michaud.....	Brakeman .....	While coupling cars.....	Thumb crushed.	
John Doughney.....	Employee.....	Fell off box car.....	Fatal.....	No inquest.
Miss Exhilde Averd.....	Passenger .....	While getting off train.....	Ankle sprained.	
Mrs. J. Edington.....	Neither.....	Struck by train while walking along track .....	Fatal.....	Employees exonerated from blame.
Mrs. Arthur Trinque.....	Passenger.....	While alighting from train.....	Slightly injured.....	
H. R. Hale .....	Engineman .....	Collision.....	Fatal .....	No inquest.
Jos. R. Campbell.....	Passenger .....	" .....	Slightly injured.	
Mrs. A. Hanes.....	Passenger .....	" .....	Slightly injured.	
Mrs. Taylor.....	Passenger.....	" .....	Slightly injured.	
Wilfred A. Drisdell.....	Passenger .....	Fell off train.....	Hand cut off..	
Léon Boudreau .....	Employee.....	Fell from car.....	Arm broken.	
Harry McFarlane.....	Neither.....	Struck by train while driving over crossing.....	Fatal.....	No inquest.
Marshall Bannister.....	Neither.....	" .....	Badly injured.	

4 GEORGE V., A. 1914

## INTERCOLONIAL

## STATEMENT of Casualties for

Date.	Time of day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1912.							
Aug. 27	7:30	18	Passenger	W. A. Munn.....	T. W. Hennessy..	420	Stellarton.....
" 27	9:20	Special.....	Freight.....	W. J. Atkinson...	J. Rioux.....	45	Pt. Levi.....
" 31	13:15		Freight.....	E. S. Vye.....	H. Cameron.....	1046	Newcastle Yard....
" 31	20:45				J. C. McKay.....	53	Stellarton Yard....
" 31	20:20				W. N. Ingram...	635	Gilbert's Lane Cross- ing, St. John.....
Sept. 3	22:30	17	Passenger	J. J. McNeil. . .	D. Duncan .....	436 2	miles west of Hopewell.....
" 4	22:40		Shunter		Jas. Coleman.....	1007	St. John Yard.....
Sept. 6	16:15		Way-freight	F. Dixon .....	A. Cook .....	89	Barnaby River.....
" 7			Shunter		J. Williams.....	1007	Sullivan's Siding, St. John.....
" 7	11:10	Special.....	Freight.....	F. A. Fowlie .....	A. Robbins.....	148	Oxford Junction....
" 10	10:30		Way-freight	D. Hains.....	J. Stewart.....	483 3	miles east of Bar- naby River.....
" 10	14:00	150	Passenger	A. Demers.....	A. Levesque . . .	427	Trois Pistoles.....
" 14	10:00		Shunter		Samuel Watson...	814	Main St. Crossing, Moncton.....
" 17							Chaudiere Bridge..
" 18	23:45						Pictou .. .. .
" 21	13:45	176	Freight.....	N. Pushie .....	W. Chisholm .....	88 1½	miles east of Har- bour au Bouche..
" 27	21:00	199	Passenger	H. Aubin. ....	J. McDavie.....	433	Little Metis. ....
" 28	7:30	Special.....	Freight.....	A. McKenzie. ....	J. S. McKee.....	46	Harcourt.....
Oct. 3	10:30		Shunter	R. G. Duff. ....	C. Cool.....	119	Bathurst .....
" 4	16:25	3	Passenger	C. B. Clarke .....	G. A. Stone .....	627	Petitcodiac.....
" 4	15:30	Special . . .	Freight.....	E. Hewitt.....	L. Turnpinst .....	62	Acadia Yard, West- ville .....
" 7	9:43	33	Passenger	J. Michaud. ....	D. Charrier.....	410	Public crossing west of St. André.....
" 20	18:00						Moncton Shops....
" 21	10:15						Cumming's Pit, River Denis.....
" 21	15:00	Special.....	Freight.....	J. Deschamplain..	J. McNaughton...	10	McKinnon's Brook Bridge.....
Oct. 22	23:00	102	Mixed.....	R. J. McNeil. ....	J. Gallivan.....	65	Rivers Denys.....
" 29	17:00		Shunter		W. F. Smallwood..	811	Moncton Yard.....
Nov. 4	13:05	50	Freight.....	A. Harris.....	J. Parent.....	611	Cap St. Ignace.....
" 4	18:23	67	Passenger..	C. D. Phillips.....	Jos. Elliott.....	634	Young St. Crossing, Halifax.....
" 9	12:45	Special.....	Freight.....	R. G. Duff.....	C. Cool .....	156	Belledune.....

## SESSIONAL PAPER No. 20

## RAILWAY—Continued.

the Year ended March 31, 1913.

Name of person injured	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
Miss Jessie McDonald.....	Neither.....	Fell while getting off car steps.....	Slightly injured.	
J. L. Hebreux.....	Brakeman.....	While jill-poking cars, stick broke.....	Slightly injured.	
Duncan Allanach.....	Brakeman.....	Tripped and fell while coupling cars.....	Back badly injured.	
Minnie McDonald.....	Neither.....	Struck on head by lump of coal.....	Head injured.	
Eloi Lirette.....	Neither.....	Struck by engine.....	Fatal.....	Accidental.
Gordon Mulloy.....	Passenger.....	Fell off train while under influence of liquor.....	Slightly injured.	
Jas. Gould.....	Neither.....	Run over by engine.....	Fatal.....	Accidental.
F. P. Appleby.....	Brakeman.....	Fell while unloading freight.....	Hand injured.....	
Wm. Sandbrook.....	Neither.....	Engine struck car on which he was unloading iron.....	Fingers badly crushed.....	
W. J. Richards.....	Brakeman.....	While uncoupling cars.....	Fingers jammed.....	
John Garlash.....	Neither.....	Struck by train while lying alongside track.....	Slightly injured.	
Arsene Ouellet.....	".....	Struck by train while driving over crossing.....	Fatal.....	No inquest.
Joseph Gagnon.....	".....	Struck by engine while crossing track.....	Badly injured.....	
Mrs. John O'Rourke.....	".....	Struck by engine while crossing track.....	Fatal.....	Ry. employees exonerated.
Jos. Dugas.....	".....	Supposed to have fainted and fallen off bridge.....	Fatal.....	Accidental.
Laughlin McInnis.....	".....	Walked off end of wharf into harbour.....	Fatal.....	No inquest.
W. Kerr.....	Brakeman.....	Fell off train.....	Badly injured about head.....	
E. Dubé.....	Neither.....	Struck by train while driving over crossing.....	Fatal.....	Accidental.
Crawford Bailey.....	".....	Attempted to cross track in front of train.....	Slightly injured.	
W. R. Gilker.....	Brakeman.....	Stepped on piece of iron.....	Foot badly sprained.....	
Miss L. Perry.....	Neither.....	Struck by train while attempting to cross track.....	Fatal.....	No inquest.
J. W. Mackay.....	Brakeman.....	Foot caught in switch frame when attempting to get on engine.....	Leg and arm badly injured.....	
J. B. Lapointe.....	Neither.....	Struck by train while driving over crossing.....	Seriously injured.	
Stephen H. Berry.....	Labourer.....	Struck knee against machine.	Knee badly injured	
Philip McLeod.....	Employee.....	While moving cars, fell.....	Left leg broken.....	
Miss Emelienne Chrétien.....	Neither.....	Stumbled and fell off bridge in trying to cross over it ahead of train.....	Badly injured.....	
Robt. Johnson.....	Passenger.....	Got caught when cars left track	Badly injured.	
M. Purdy.....	Brakeman.....	While coupling cars.....	Hand crushed.	
C. Turgeon.....	Brakeman.....	While attempting to get on train.....	Left leg cut off.	
Thos. Betts.....	Neither.....	Struck by train while attempting to cross track.....	Badly injured.	
J. Dempsey.....	Brakeman.....	While coupling cars.....	Finger smashed.	

4 GEORGE V., A. 1914

## INTERCOLONIAL

## STATEMENT of Casualties for

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	Number of Engine.	Place of Accident.
1912.							
Nov. 13	19 20	Special.....	Freight.....	A. A. McNeil....	J. McRury.....	83	Sydney.....
" 15	19 30	17	Passenger...	J. R. Fisher.....	J. Wall.....	401	Young St. Crossing, Truro.....
" 16	11 00						Pictou.....
" 20	6 45		Freight.....	John Cochrane...	M. J. Taylor.....	426	Sunny Brae Stn....
" 21	11 00						Pictou.....
" 21	14 00		Shunter.....	John Kelly.....	A. Dunbar.....	620	Mulgrave Yard....
" 26	6 43	133	Passenger...	J. B. Crockett....	G. B. Story.....	636	Robinson St. Monc- ton.....
" 29	16 47	Special.....	Freight.....	A. Plourde.....	J. A. Michaud....	110	L'Islet.....
Dec. 1	5 55		Shunter.....			825	Halifax.....
" 3	9 34	145	Passenger...	N. St. Pierre....	Jas. Houston....	619	Public crossing East of St. Bruno....
" 9	4 00	39	Way-freight	J. Swetnam.....	A. J. Russell.....	113	Newcastle Yard....
" 13	14 55	104	Freight.....	J. H. Pushie.....	Wm. McDonald....	64	2½ mil. West of Alba,
" 15	12 35	33	Passenger...	A. Begin.....	J. Miller.....	431	St. Joseph Stn....
Dec. 16	3 18	148	Way-freight	T. Dussault.....	A. Bégin.....	87	Mitchell.....
" 19	22 00	33	Passenger...	P. Sirois.....	W. Mountain.....	147	
" 19	13 30		Freight.....	J. A. Bouchard...	R. L. Mitchell....	442	Southwark Yard...
" 19	13 30		Freight.....	G. A. Mackay....	H. Cummings....	44	Trenton.....
" 20	6 35	34	Passenger...	T. C. Ayer.....	O. McGinity.....	419	Rogersville.....
" 20	22 00		Shunter.....		P. O'Leary.....	811	Main Street, Moncton..
" 26	11 40		Shunter.....	J. Rioux.....	F. Cloutier.....	45	St. Romuald.....
" 26	3 00		Shunter.....		J. Kean.....	96	Ste. Flavie Yard...
" 27	20 50		Shunter.....		R. Hamilton....	823	Truro Yard.....
" 31	15 30						Round House, Halifax..
1913.							
Jan. 1	23 00	329	Passenger...	P. Keenan.....	H. Belyea.....	1053	Fredericton Station.
" 9	5 36						St. John.....
" 10	7 30		Light engine			1006	Riv. du Loup Yard.
" 10	14 00	Special	Freight.....	G. A. McKay.....	H. Cummings....	146	Trenton.....
" 13	17 50	Special	Freight.....	J. Brownell.....	J. L. Kennedy....	152	Memramcook.....
" 14	1 45	Special	Freight.....	W. Lacombe.....	J. Hudon.....	110	L'Islet.....
				N. Grondin....	E. LeBel.....	614	
Jan. 15.	14 35	137	Passenger...	H. G. Thompson..	W. H. Auderson..	1047	St. John Yard.....
" 21.	14 30						Moncton Shops...
" 25.	12 10	Special.	Freight.....	E. Johnson.....	G. Gaxley.....	1096	Dartmouth.....

## SESSIONAL PAPER No. 20

## RAILWAY—Continued.

the Year ended March 31, 1913.

Name of person injured.	Whether passenger or employee.	Particulars of Accident.	Extent of Injury.	Verdict.
Archie Jendry.....	Neither.....	Supposed to have been struck by train.....	Fatal.....	Accidental.
Mrs. Grent.....	Passenger.....	Jumped from moving train.....	Slightly injured.	
Warren Jollymore.....	Checker.....	Boiler plate fell on leg.....	Leg injured.	
John Northrup.....	Employee.....	Struck by train.....	Fatal.....	Speed train excessive approaching Stn.
J. C. Proffitt.....	Employee.....	Tripped and fell while unloading freight.....	Slightly injured.	
Joseph Smith.....	Brakeman.....	While coupling cars.....	Foot crushed.	
Thos. Best.....	Neither.....	Struck by train while walking on track.....	Badly injured.	
A. Plourde.....	Conductor.....	While getting down side of car, ladder broke.....	Badly shaken up.	
G. F. Neary.....	Brakeman.....	Slipped and fell while getting off engine.....	Back and legs injured.	
Arthur Collins.....	Neither.....	Supposed to have been struck by train.....	Fatal.....	Employees exonerated from blame
W. P. McInnis.....	Fireman.....	Lump of coal fell on his head.....	Head injured.	
Wm. McDonald.....	Driver.....	Train left track.....	Ankle sprained.	
Patrick Barrigan.....	Neither.....	Struck by train while walking on track.....	Fatal.....	Accidental.
W. Mountain.....	Engineer.....	Collision.....	Slightly injured.	
A. Demers.....	Fireman.....	.....	Slightly injured.	
J. A. Bouchard.....	Conductor.....	Supposed to have been struck by shunting engine.....	Fatal.....	Accidental.
Percy Crane.....	Neither.....	Engine struck steam shovel under which he was working.....	Badly injured.	
John D. Brock.....	Passenger.....	Struck by a truck which was hit by train.....	Slightly injured.	
H. H. Archibald.....	Employee (not on duty).....	Jumped from 33 train and was struck by shunter.....	.....	No inquest.
R. Begin.....	Brakeman.....	Car left track.....	Slightly injured.	
Albert Michaud.....	Yardman.....	While uncoupling hose.....	Right leg scalded.	
S. Horton.....	Brakeman.....	Got foot caught under wheels.	Foot badly crushed.	
Peter McRae.....	Carpenter.....	While working at planer.....	Thumb and finger cut off.	
Garnett Love.....	Neither.....	Attempted to get on moving train.....	Fatal.....	No blame attached to railway or employees.
Geo. Crawford.....	Fire Builder.....	Walked into ash pit.....	Leg injured.	
Aurele Dumont.....	Brakeman.....	While coupling cars.....	Left foot crushed.	
S. Sweeney.....	Neither.....	Fell under wheels of engine.....	Leg badly crushed.	
M. Crockett.....	Brakeman.....	Fell while unloading freight.....	Badly shaken up.	
J. Hudon.....	Engineer.....	Freight Special collided with engine on main line.....	Fatal.....	Accidental.
J. E. Roy.....	Fireman.....	.....	Badly injured.	
A. Rioux.....	Brakeman.....	.....	Badly injured.	
E. LeBel.....	Conductor.....	.....	Injured about head	
A. Saindon.....	Fireman.....	.....	Badly injured.	
A. Jean.....	Brakeman.....	.....	Slightly injured.	
Chas. Gauvin.....	Brakeman.....	.....	Slightly injured.	
Horace Rivard.....	Brakeman.....	.....	Slightly injured.	
Clement Leonard.....	Neither.....	Struck by train while attempting to cross track.....	Badly injured.....	
Frank Killam.....	Fitter.....	Plate fell on foot.....	Badly bruised.....	
Edward Burke.....	Brakeman.....	Fell from box car.....	Both ankles badly sprained.	

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## INTERCOLONIAL

## STATEMENT of Casualties for

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.
1913.							
Jan. 26.	.....	Special .....	Freight.....	D. Sweeney.....	A. Cook.....	8	Kent Jet.....
" 28.	7.43	147	" .....	P. Tardiff .....	A. Gidnette. ....	643	Bolœil Stn.....
" 28.	5.40	Special.	" .....	J. W. Coles. ....	E. Rushton.....	24	East Mines.....
" 28.	16.00	.....	.....	.....	.....	.....	Moncton Shops.....
" 29.	15.00	.....	Shunter .....	.....	R. Hamilton.....	833	Truro Yard .....
Feb. 1.	1.30	.....	" .....	.....	P. McInnis.....	54	Deep Water Terminus, Halifax.
" 3.	11.30	Special.	Freight.....	G. A. McKay....	H. Cummings.....	63	Trenton.....
" 9.	1.45	.....	Shunter .....	.....	D. Stewart.....	76	Truro.....
" 10.	7.00	.....	" .....	.....	G. Cuthbertson..	801	St. John Yard.....
" 11.	6.00	.....	" .....	.....	.....	813	Ste. Flavie.....
" 11.	9.00	71	G.T.R. Spl.	L. Smith.....	R. Emond.....	2438	Chaudiere Jet.....
" 21.	10.16	.....	Shunter .....	.....	J. Jones.....	65	Pt. Tupper Yd.....
" 25.	17.30	39	Freight .....	W. W. Irving. ....	A. Russell.....	13	Two miles West of Dalhousie Jet.
Mar. 1.	10.30	.....	.....	.....	.....	.....	Moncton Shops.....
" 1.	10.50	34	Passenger.....	A. Legace.....	W. E. Turner.....	442	East of Drummondville.
" 3.	16.10	42	Freight.....	R. W. Orchard....	E. Shirley.....	50	Lac au Saunon.....
" 6.	8.00	43	Shunter .....	.....	J. O. Gagnon.....	.....	Ste. Flavie Yard...
Mar. 7	18.15	.....	Light engine .....	.....	J. D. McKay. ....	627	Moncton Yard.....
" 10	7.50	.....	Shunter .....	.....	M. Flavin.....	825	Halifax .....
" 10	.....	.....	.....	.....	.....	.....	Near Gayton crossing.
" 13	4.30	Immigrant Special.	.....	T. G. Stratton....	J. Tweedie.....	623	Dalhousie Jet.....
" 19	6.20	Special.....	Freight .....	J. St. Pierre .....	G. Mann.....	202	St. Alexis.....
" 20	24.50	" .....	" .....	J. McLaughlin....	G. W. Conway....	102	Stellarton.....
" 23	2.30	.....	Auxiliary.....	.....	G. Wortman.....	11	Bell Siding, Moncton.....
" 27	14.50	Special.....	Freight .....	J. R. McManus .....	L. Bradshaw.....	24	Amherst .....
" 28	12.20	" .....	" .....	D. McKinnon.....	D. McDonald.....	65	Sydney River crossing.
" 28	8.30	" .....	" .....	J. W. Horseman .....	C. Nickerson.....	213	Newcastle.....
" 29	18.35	34	Passenger.....	F. Laliberte.....	A. Berube.....	431	St. Eloi.....
" 29	21.50	Special.....	Freight .....	Z. Berube.....	Ed. Shirley.....	416	Millstream.....
" 30	14.00	" .....	" .....	P. Therriault.....	Ed. Thomas .....	90	.....
" 30	.....	.....	.....	C. Proulx .....	G. Boudreau .....	98	Chaudiere Yard.....

## SESSIONAL PAPER No. 20

RAILWAY—*Continued.*

the Year ended March 31, 1913.

Name of Person Injured.	Whether Passenger or Employee.	Particulars of Accident.	Extent of Injury.	Verdict.
C. G. Scurr.....	Brakeman.....	Knocked off van when train collided with car.	Slightly injured...	Accidental.
John Fournier.....	Neither.....	Struck by train.....	Fatal.....	
Hiram Rufuse.....	Brakeman.....	Tripped and fell while going over train.	Knee injured.....	
Calix White.....	Fitter.....	Wrench which he was using slipped from hand.	Breast injured....	
Walter McNutt.....	Brakeman.....	While getting on engine fell under wheels.	Fatal.....	No inquest.
Norman Graham.....	Neither.....	Struck by engine while sleeping alongside of track.	Foot cut off.....	
Sam'l. Matheson.....	Brakeman.....	While coupling cars.....	Fingers crushed...	No inquest.
S. B. Lane.....	Foreman shunter.....	While uncoupling cars.....	Arm slightly inj'd	
L. A. Phillips.....	Brakeman.....	While coupling cars. . .	Hand badly crush'd	
J. B. Beaulieu.....	Yardman.....	Struck by a projecting truss rod of a car.	Injured about head	
Eustache Tardif.....	Neither.....	Struck by a train while walking along track.	Fatal.....	No inquest.
J. P. McNeill.....	Brakeman.....	Fell off engine under wheels	Right arm crushed and head injured	
Donat LeBlanc.....	Neither.....	Attempting to get on moving train.	Fatal.....	No inquest.
Vincent Backler .....	Machine hand.....	Coat caught in machine....	Arm badly injured.	
Victor Bery.....	Neither.....	Sleeping alongside track while under influence of liquor.	Badly injured....	No inquest.
J. A. Ouellet.....	Brakeman.....	While unloading freight....	Foot injured . . .	
Geo. Levasseur.....	Yard foreman.....	Got caught while uncoupling cars.	Slightly injured....	
James McKay.....	Driver.....	Collided with cars being shunted by shunting engine....	Fatal.....	
Ross McPherson .....	Fireman .....	.....	Seriously injured.	Ry. exonerated from blame.
Jas. Ryan .....	Brakeman .....	While coupling cars.....	Foot badly injured.	
Mrs. D. Goodell .....	Neither .....	Supposed to have been struck by train.....	Fatal .....	No inquest
Rueben Zahner.....	Passenger.....	Train left track.....	Slightly injured.	
M. Michaud.....	Brakeman.....	Jumped off train and fell....	Cut about face.	
J. A. McDonald.....	" .....	Struck by brake lever.....	Injured about face.	
Blair J. White.....	" .....	Got hand caught while coupling cars .....	Hand injured.	No inquest.
Willard Hanson .....	" .....	While unloading freight. ....	Hand slightly injured.	
G. Taylor.....	Neither.....	Train struck team.....	Slightly injured.	
W. Hannon.....	Brakeman.....	Fell from box car .....	Slightly injured.	
J. Rossignol.....	Baggageman.....	Baggage car caught on fire....	Hand badly burned	No inquest.
J. Nadeau.....	Brakeman.....	.....	" " "	
L. Cantin.....	" .....	.....	" " "	
L. E. Benville.....	" .....	Collision.....	Slightly injured.	No inquest.
P. Guay.....	Fireman .....	While working at ash pan trap.	Arm badly crushed.	

## PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,

CHARLOTTETOWN, P.E.I., May 30, 1913.

SIR,—I have the honour to submit the following report of the working of the Prince Edward Island railway, for the fiscal year ending March 31, 1913.

I also enclose the report of the mechanical superintendent, and the following statements prepared by the accountant and auditor, and the mechanical accountant and storekeeper.

- No. 1. Capital.
2. Revenue.
3. Maintenance of way and structures.
4. Maintenance of equipment.
5. Traffic expenses.
6. Transportation expenses.
7. General expenses.
8. General stores.
9. General balance.
10. Statement of averages.
  - Statement of receipts.
  - Passenger statement.
  - Freight statement.
  - Descriptive statement of freight transported.

A. Statement showing the number of locomotives and the various classes of cars.

B. Statement showing the mileage made, and the coal, oil and waste consumed by locomotives.

The mileage of the railway in operation on March 31, 1912, was 267.5 miles. The Elmira branch was opened for traffic on November 25, 1912, the mileage of which is 9.9, making the total mileage of railway in operation on March 31, 1913, 277.4 miles.

## CAPITAL ACCOUNT.

The expenditure to March 31, 1912, was . . . . . \$8,687,727 38

The additions during the year were as follows:—

Branch line, Harmony to Elmira . . . . .	66,146 15
Increased accommodation, Summerside . . . . .	6,051 67
To increase accommodation and facilities along the line . . . . .	8,549 21
Original construction . . . . .	199 50
Car ferry, &c. . . . .	8,276 20
Claims, E. A. Wallberg . . . . .	13,778 30

Making the total on March 31, 1913 . . . . . \$8,790,728 41

*Branch line, Harmony to Elmira.*—This branch line was completed and the road opened for traffic in the month of November last. The outlook for business on this line is none too bright, and its operation will more than likely tend to increase a deficit.

## SESSIONAL PAPER No. 20

*Increased accommodation, Summerside.*—This was material purchased for and labour done to the railway wharf. Piles were driven and covered with heavy hardwood plank on the sides, and considerable repairs were made to top of the wharf.

*To increase accommodation and facilities along the line.*—This amount was voted for buildings erected in 1911-12 and carried in expense account, which was charged out to capital account in the year just closed.

*Original construction.*—This was for solicitors' taxed costs in connection with the expropriation of lands which belonged to the estate of the late Lady Louisa Wood—\$49.50—and damages paid to the heirs of the late Dr. P. A. McIntyre as compensation in full for closing of crossing at Souris, \$150.

*Car ferry.*—This amount was for vouchers made out at Ottawa for engineering work done in connection with proposed car ferry between Cape Traverse and Cape Tormentine.

*Claims E. A. Wallberg.*—Vouchers were made out by the Department at Ottawa in favour of Mr. E. A. Wallberg on account of building contracts.

## REVENUE ACCOUNT.

The revenue has again been in excess of all previous years, marking a steady advance in agriculture and other industries, as well as an increase in the number of visitors, who contributed to the increase of passenger traffic.

The gross earnings and working expenses for the year compare as follows:—

Gross earnings. . . . .	\$ 389,474 07
Working expenses. . . . .	489,972 34
Difference. . . . .	\$ 100,498 27

The gross earnings compare with the previous year as follows:—

In 1911-12. . . . .	\$ 367,203 39
1912-13. . . . .	389,474 07
Increase. . . . .	\$ 22,270 68

The earnings from passenger traffic compare as follows:—

In 1911-12. . . . .	\$ 153,284 42
1912-13. . . . .	171,348 57
Increase. . . . .	\$ 18,064 15

The earnings from freight traffic compare as follows:—

In 1911-12. . . . .	\$ 176,861 68
1912-13. . . . .	180,347 31
Increase. . . . .	\$ 3,485 63

The earnings from mails and sundries compare as follows:—

In 1911-12. . . . .	\$ 37,057 29
1912-13. . . . .	37,778 19
Increase. . . . .	\$ 720 90

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The number of passengers carried compare as follows:—

	Number.
In 1911-12. . . . .	388,076
1912-13. . . . .	433,888
Increase. . . . .	45,812

The weight of freight carried compares as follows:—

	Tons.
In 1911-12. . . . .	120,218
1912-13. . . . .	122,784
Increase. . . . .	2,566

## WORKING EXPENSES.

The working expenses compare with the previous year as follows:—

In 1911-12. . . . .	\$ 449,962 91
1912-13. . . . .	489,972 34
Increase. . . . .	\$ 40,009 43

The averages compare with the previous year as follows:—

*Per Mile run by Locomotives.*

	Cents.
In 1911-12. . . . .	103.84
1912-13. . . . .	110.72

*Per Mile run by Trains.*

In 1911-12. . . . .	127.43
1912-13. . . . .	135.46

*Expenditure per Mile of Railway.*

In 1911-12. . . . .	\$ 1,685 25
1912-13. . . . .	1,814 71

## TRACK.

54,597 railway ties in main line track, 3,527 culled ties in sidings, and 37 sets switch ties and 30 head-blocks and frames were renewed.

1,500 feet of 50-lb. steel rails were laid in main line of the Vernon section, 1,448 feet 50-lb. steel rails in main line of Vernon River section, and 300 feet 56-lb. steel rails in main line at Kensington, replacing other rails.

Twenty-four new frogs were placed in main line to replace worn frogs.

## SIDINGS.

At Tignish 200 feet of 50-lb. steel rails were laid to replace iron rails.

At Alberton 1,800 feet of 50-lb. steel rails were laid in putting in a through siding to Alberton ballast pit, and 600 feet of new spur siding was placed in ballast pit.

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At Summerside a siding, 380 feet long, was constructed, and 1,000 feet of 50-lb. steel rails laid on sidings to replace iron rails.

At Charlottetown a new siding, 500 feet in length, was laid with 50-lb. steel rails, and 600 feet of 50-lb. steel rails laid on sidings in replacing other rails.

At Lake Verde a new siding, 404 feet long, was laid with 50-lb. steel rails.

At Brackley Point a new siding, 200 feet long, was laid with 56-lb. steel rails.

At Perth ballast pit a new siding was laid with 56-lb. steel rails, which is 1,000 feet in length.

## FENCING.

53,567 feet new Page wire fence was erected on cedar posts. 3,398 feet permanent snow-fence, and 3,420 feet portable snow-fence were built. Temporary snow-fences were erected with brush and other material, a large quantity having been used for this purpose.

All fences were repaired where necessary.

One hundred farm gates, which were made by our carpenters, were placed where new gates were necessary.

## BALLASTING.

Twelve miles of track were ballasted with sand ballast and two and a quarter miles with cinders, during the summer.

## BRIDGES.

At Harmony new ties and rail wall plates were placed on bridge.

At Souris a new overhead bridge, 50 feet long, 13 feet wide, and 18 feet high, was built across the wharf track, with hemlock and other timber.

At Mount Stewart the stonework of bridge was painted.

All other bridges requiring repairs received them.

## CULVERTS.

At Elmsdale a new concrete pipe culvert, 20 feet long, 15 inches in diameter, was put in to replace a wooden one which was worn out.

At Piusville a new concrete pipe culvert, 28 feet long, 18 inches in diameter, was put in to replace a wooden one worn out.

At New Annan a new concrete pipe culvert, 30 feet long, 20 inches in diameter, was put in to replace a wooden one.

At St. Teresa a new concrete pipe culvert, 30 feet long, 18 inches in diameter, was put in to replace a wooden one.

At Hopefield the stone culvert was repaired and extended.

Five new wooden culverts were built.

Thirty-nine wooden culverts were repaired with timber, and all other culverts requiring repairs were attended to.

Thirty-one cattle-guards were rebuilt with hemlock timber, hard pine stringers, and hemlock mud sills.

## WHARFS AND BREASTWORKS.

At Summerside creosoted piles and hardwood piles were driven in wharf, and wharf faced with 3½-inch hardwood plank a distance of 300 feet and to a depth of 10 feet. Covering of wharf was repaired where it was found necessary to do so.

At Georgetown the wharf was repaired with 10-inch x 12-inch hemlock timber, and new fenders placed on it.

At Mount Stewart the wharf was covered with 3-inch hemlock plank.

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## BUILDINGS AND PLATFORMS.

*Tignish*.—A new concrete foundation was constructed for turntable, and a second-hand turntable from the Intercolonial railway placed in position. Engine-house and coal shed were repaired. Agent's dwelling was papered and painted, and the ceilings of it whitened.

*Deblois*.—Station windows were repaired.

*St. Louis*.—Station windows were repaired.

*Alma*.—Station doors and windows were repaired.

*Alberton*.—Coal shed and section tool-house received repairs.

*Elmsdale*.—Station doors and windows were repaired.

*Piusville*.—Station doors and windows were repaired.

*Bloomfield*.—A new foundation was placed under the station, and an addition 15 feet by 22 feet built to freight-house. Waiting room and office were sheathed, and new floors laid in them. The exterior of station was painted.

*Howlan*.—The interior and exterior of station were painted, and repairs made to doors and windows.

*O'Leary*.—The ceiling of dining room in agent's dwelling was sheathed, and the room painted.

*Coleman*.—Exterior of station was repaired.

*West Devon*.—Station was repaired on the outside.

*Conway*.—Doors and windows were repaired, and interior and exterior of station painted.

*Port Hill*.—A new addition was built to agent's dwelling. General repairs were made to inside of dwelling, which was also papered and painted. The exterior of station was painted.

*Miscouche*.—A new foundation was built under the station. Waiting room and office were sheathed, and new floors placed in them. Station and agent's dwelling were painted on the outside.

*Summerside*.—A new concrete foundation was constructed for scales, and an ash-pit placed in yard. Roof of water tank was repaired. Inside of baggage-room was sheathed. A new telegraph table was provided for office. Station was repaired where necessary and all other buildings received repairs.

*Travellers' Rest*.—Station platform was repaired, and the interior and exterior of station painted.

*New Annan*.—Station platform was repaired. Interior and exterior of station were painted.

*Kensington*.—Station platform was repaired. Interior of agent's dwelling was papered and painted, and ceilings whitened.

*Freetown*.—Station platform was repaired. Agent's dwelling was repaired, and the inside of it painted.

*Emerald*.—Station platform was renewed, and repairs made to the station and dwelling.

## SESSIONAL PAPER No. 20

*Bradalbane*.—New storm doors and windows were made for station. A new hardwood floor was put down in agent's kitchen and finished in oil, and one room of dwelling painted. Station doors and windows were repaired.

*Elliott's*.—A new window and door were placed on station, and a new flue built.

*Clyde*.—Station platform was repaired.

*Hunter river*.—Station platform, and doors and windows of station were repaired.

*North Wiltshire*.—Station platform was renewed, and a storm window made for office.

*Colville*.—Station platform was repaired.

*Loyalist*.—Station platform was renewed.

*Milton*.—Station platform was renewed.

*Cape Traverse*.—Station, dwelling, station platform, engine-house and ash-pits were repaired. A new water closet was built.

*Albany*.—Station platform was repaired.

*Kinkora*.—Station platform was repaired.

*Royalty Junction*.—Agent's dwelling was painted, and a new coal shed built.

*Charlottetown*.—Roof of freight-house was shingled. Gravel roofs of machine shop, power house and car shop were repaired. General offices were painted and the ceilings whitened. Freight offices were painted inside.

*Brackley Point*.—A new station platform was built.

*Union*.—A new stock-pen was erected.

*Bedford*.—An addition, 15 feet by 22 feet, was built to freight house. Waiting room and office were sheathed and painted, and new floors placed in them. Exterior of station was painted.

*Mount Stewart*.—Station platform, roof of station, and nun signal were repaired. Exterior of station was painted. Agent's dwelling was papered and painted. A new water closet was built.

*Pisquid*.—A new station, 11 feet x 25 feet, was built, containing a waiting room and freight room. A new platform, 80 feet long by 3 feet wide, was laid.

*Peake's*.—Roof of station was shingled. Platform was repaired.

*St. Teresa*.—A new platform was built opposite church.

*48 Road*.—A new station, 11 feet x 25 feet, was built, containing waiting-room and freight-room. A new platform was laid.

*Perth*.—A new station platform was provided, 95 feet long by 4 feet wide.

*Cardigan*.—Freight house, roof of freight house, and agent's dwelling were repaired. New doors were placed on freight house.

*Georgetown*.—A new station platform, 60 feet long, 4 feet wide, was constructed. A new covering was placed on semaphore stand. Engine house, coal shed and station were repaired. Station, warehouse and water tank were painted on the outside.

*Montague*.—Doors and counter of office were changed and repairs made to office. Station and warehouse were painted on the outside.

4 GEORGE V., A. 1914

*Morell*.—Station was repaired. A new window was placed in dining room.

*St. Peter's*.—Station platform was renewed.

*Midgell*.—A new shelter station, 8 x 18 feet, containing waiting room and freight room, and a new station platform were built.

*Bear River*.—Station platform was renewed.

*Souris*.—Roof of freight house on wharf was repaired. A new battery room, 6 feet x 8 feet, was built in station.

*Fountain Head*.—A new shelter station, 8 feet x 18 feet, was built.

*Elmira*.—Coal shed was rebuilt and a new coal hoist built. A new signal was placed on station.

*Hermitage*.—Station received new doors, windows, and flue. Station platform was repaired.

*Millview*.—Station was provided with new doors, windows and flue.

*Vernon River*.—Station platform was repaired, and new storm doors placed on station.

*Grandview*.—Station platform was repaired.

*Fodhla*.—Station platform was repaired.

*Wood Island*.—Station platform and roof of station were repaired. A new flue was placed on station.

*Vigg*.—Station platform was repaired.

*Village Green*.—Station was provided with new doors, windows and flue.

*Hopefield*.—Station platform was repaired.

*Murray Harbour*.—Station doors and windows were repaired. A large number of new sign boards were placed on stations during the year.

## STORES.

The value of stores purchased was.. . . .	\$ 147,958 41
The value of stores used was.. . . .	156,441 14
The value of material sold was.. . . .	4,130 89
The value of stores on hand at the end of the year was:—	
Miscellaneous.. . . .	36,226 61
Fuel.. . . .	19,046 59
Roadway and bridge material.. . . .	16,573 34
	<hr/>
	\$ 71,846 54

## GENERAL.

The rolling stock is in good condition. The roadbed has received careful attention, all needed repairs have been made to buildings, and all are in a satisfactory condition. I enclose returns of casualties which occurred during the year.

I have the honour to be, sir,

Your obedient servant,

H. McEWEN,  
Superintendent.

F. P. GUTELIUS, Esq.,  
General Manager, Canadian Government Railways,  
Moncton, N.B.

SESSIONAL PAPER No. 20

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT—12 MONTHS ENDING MARCH 31, 1913.

1912. Mar. 31..	Dr. To cost of P. E. I. Railway, to date. . .	\$ cts.	\$ cts.	1912. Mar. 31..	Cr. By Dominion of Canada.....	\$ cts.
1913. Mar. 31..				1913. Mar. 31..		
	To Branch Line, Harmony to Elmira.....	66,146 15				
	Claims, A. E. Wallberg..	13,778 30				
	Inc. Accommodation and Facilities along the line . . . . .	8,549 21				
	Car Ferry, &c. . . . .	8,276 20				
	Inc. Accommodation, Summerside . . . .	6,051 67				
	Original Construction.....	190 50				
			103,001 03			
			8,790,728 41			
						8,790,723 41

E. & O. E.

W. T. HUGGAN,  
*Accountant and Auditor.*

4 GEORGE V., A. 1914

## PRINCE EDWARD ISLAND RAILWAY.

REVENUE ACCOUNT—12 months ended March 31, 1913.

EXPENDITURE.	\$ cts.	EARNINGS.	\$ cts.
Maintenance of way and structures..	135,434 58	Passenger. ....	171,348 57
Maintenance of equipment.....	86,656 33	Freight.....	180,347 31
Traffic expenses.....	1,113 36	Mails and express ..	26,446 49
Transportation expenses.....	251,186 09	Miscellaneous.....	11,331 70
General expenses.....	15,581 98		
			389,474 07
		Balance. ....	100,498 27
	489,972 34		489,972 34

E. & O. E.  
CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,  
*Accountant and Auditor.*

## PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF WAY AND STRUCTURES—12 months ended March 31, 1913.

	\$ cts.
No. 1 Superintendence.....	3,404 60
2 Ballast.....	5,235 01
3 Ties.....	22,349 25
4 Rails.....	932 43
5 Other track material.....	3,478 98
6 Roadway and track.....	66,646 35
7 Removal of snow and ice .....	3,757 54
9 Bridges, trestles and culverts.....	1,083 05
10 Over and under grade crossings.....	23 73
11 Grade crossings, fences, cattle guards and signs.....	6,111 68
12 Snow and sand fences, and snow sheds .....	886 75
13 Signal and interlocking plants.....	248 78
14 Telegraph and telephone lines.....	745 94
16 Buildings, fixtures and grounds.....	16,991 40
17 Docks and wharfs.....	1,130 07
18 Roadway tools and supplies .....	2,156 43
20 Work equipment, renewals.....	
23 Stationery and printing.....	246 59
25 Other expenses.....	6 00
	135,434 58

E. & O. E.  
CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,  
*Accountant and Auditor.*

SESSIONAL PAPER No. 20

## PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE OF EQUIPMENT—12 months ended March 31, 1913.

	\$	cts.
No. 28. Superintendence.....	6,353	09
29. Steam locomotives, repairs.....	29,902	68
35. Passenger train cars, repairs.....	16,770	37
36. " " " renewals.....		
38. Freight " " repairs.....	16,615	19
39. " " " renewals.....	3,640	16
47. Shop machinery and tools.....	4,236	06
49. Injuries to persons.....	27	90
50. Stationery and printing.....	243	40
52. Other expenses.....	7,375	06
54. Work equipment, repairs.....	1,502	42
	86,656	33

E. & O. E.  
CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,  
*Accountant and Auditor.*

## PRINCE EDWARD ISLAND RAILWAY.

TRAFFIC EXPENSES—12 months ended March 31, 1913.

	\$	cts.
No. 57. Superintendence.....	21	14
58. Outside agencies.....		
59. Advertising.....	1,092	22
60. Stationery and printing.....		
65. Other expenses .....		
	1,113	36

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CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,  
*Accountant and Auditor.*

4 GEORGE V., A. 1914

## PRINCE EDWARD ISLAND RAILWAY.

TRANSPORTATION EXPENSES—12 months ended March 31, 1913.

		\$	cts.
No. 66	Superintendence .....	6,193	37
" 67	Despatching trains .....	3,226	04
" 68	Station employees .....	57,383	57
" 72	Station supplies and expenses .....	7,426	13
" 73	Yardmasters and their clerks .....	2,661	69
" 74	Yard conductors and brakemen .....	2,796	99
" 76	Yard supplies and expenses .....	57	93
" 77	Yard enginemen .....	5,300	10
" 78	Enginehouse expenses, yard .....	1,537	25
" 79	Fuel for yard locomotives .....	3,925	60
" 80	Water for yard locomotives .....	120	00
" 81	Lubricants for yard locomotives .....	141	72
" 82	Other supplies for yard locomotives .....	131	48
" 86	Road enginemen .....	27,096	47
" 87	Enginehouse expenses, road .....	12,937	16
" 88	Fuel for road locomotives .....	49,779	34
" 89	Water for road locomotives .....	2,425	49
" 90	Lubricants for road locomotives .....	1,235	18
" 91	Other supplies for road locomotives .....	1,143	49
" 94	Road trainmen .....	37,720	26
" 95	Train supplies and expenses .....	8,652	18
" 96	Interlockers, block, and other signals, operation .....	129	80
" 97	Crossing flagmen and gatemen .....	420	99
" 98	Draw bridge operation .....	691	08
" 99	Clearing wrecks .....	822	95
" 100	Telegraph and telephone, operation .....	8,372	41
" 101	Operation floating equipment .....	215	51
" 103	Stationery and printing .....	6,595	06
" 105	Other expenses .....	47	50
" 106	Loss and damage, freight .....	562	03
" 107	Loss and damage, baggage .....	24	65
" 108	Damage to property .....	1,073	99
" 109	Damage to stock on right of way .....	277	68
" 110	Injuries to persons .....	1	00
		251,186	09

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CHARLOTTETOWN, P.E.I.W. T. HUGGAN,  
*Accountant and Auditor.*

## PRINCE EDWARD ISLAND RAILWAY.

GENERAL EXPENSES—12 months ended March 31, 1913.

		\$	cts.
No. 113	Salaries and expenses of General Officers .....	1,822	15
" 114	Salaries and expenses of clerks and attendants .....	7,330	24
" 115	General Office supplies and expenses .....	217	11
" 116	Law expenses .....	177	02
" 118	Relief department expenses .....	5,073	87
" 120	Stationery and printing .....	599	93
" 121	Other expenses .....	361	66
		15,581	98

E. & O. E.  
CHARLOTTETOWN, P.E.I.W. T. HUGGAN,  
*Accountant and Auditor.*

SESSIONAL PAPER No. 20

## PRINCE EDWARD ISLAND RAILWAY.

GENERAL STORES ACCOUNT—12 months ended March 31, 1913.

1912.	Dr.	\$ cts.	\$ cts.
March 31.....	To Balance brought forward.....		63,548 56
1913.			
March 31.....	To Purchases during the year.....	147,958 41	
	Charges from other departments.....	8,334 43	
	Labour, etc.....	4,765 25	
	Pay rolls.....	7,811 92	
			168,870 61
1913.	Cr.		232,418 57
March 31.....	By Issues during the year.....		160,572 03
	Balance { Ordinary stores, including stationery.....	36,226 61	71,846 54
	{ Fuel.....	19,046 59	
	{ Roadway and bridge material.....	16,573 34	

E. & O. E.  
CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,  
*Accountant and Auditor.*

## PRINCE EDWARD ISLAND RAILWAY.

GENERAL BALANCE—12 months ended March 31, 1913.

Dr.	\$ cts.	Cr.	\$ cts.
General stores.....	71,846 54	Dominion account.....	95,560 62
Post Office Department.....	11,533 14	Canadian Car & Foundry Co.....	690 69
Cash.....	9,846 47	Rhodes, Curry & Co.....	390 00
Station agents.....	2,789 89	John Simon.....	220 78
Starr Manufacturing Co.....	361 35	Unclaimed wages.....	50 71
Intercolonial Railway.....	244 74	Whitehead Bros.....	42 50
Suspense account.....	103 72		
Grand Trunk Railway.....	68 09		
Rents.....	54 87		
Militia Department.....	56 24		
Local Government, P. E. I.....	20 25		
Judge Weatherbie.....	30 00		
	96,955 30		96,955 30

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CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,  
*Accountant and Auditor.*

## PRINCE EDWARD ISLAND RAILWAY.

STATEMENT OF AVERAGES—Year ended March 31, 1913.

		Miles.
Mileage of railway .....		270
Engine mileage.....		442,497
Total train mileage .....		361,714
Total car mileage.....		2,334,635
<hr/>		
Ratio of earnings to gross earnings—		
Passenger.....	Per cent.	46·31
Freight.....	"	43·99
Mails and express.....	"	9·70
<hr/>		
Gross earnings per mile of railway.....	Dollars.	1,142 50
" engine mile.....	Cents.	88·02
" train mileage.....	"	107·67
" car mileage .....	"	16·68
<hr/>		
Ratio expenses to gross earnings—		
Maintenance of way and structures.....	Per cent.	34·77
Maintenance of equipment.....	"	25·25
Traffic expenses.....	"	0·29
Transportation expenses .....	"	64·49
General expenses.....	"	4·00
<hr/>		
Expenses per train mile—		
Maintenance of way and structures.....	Cents.	37·44
Maintenance of equipment .....	"	23·96
Traffic expenses.....	"	0·31
Transportation expenses .....	"	69·44
General expenses.....	"	4·31
<hr/>		
Expenses per mile of railway—		
Maintenance of way and structures.....	Dollars.	501 61
Maintenance of equipment.....	"	320 95
Traffic expenses .....	"	4 12
Transportation expenses.....	"	930 32
General expenses.....	"	57 71
<hr/>		
Locomotive and car repairs, per locomotive and car—		
Locomotive.....	Dollars.	1,359 21
Passenger cars.....	"	342 25
Freight cars.....	"	39 18

E. &amp; O. E.

CHARLOTTETOWN, P.E.I.

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*Accountant and Auditor.*

SESSIONAL PAPER No. 20

## PRINCE EDWARD ISLAND RAILWAY.

## STATEMENT OF RECEIPTS.

Months.	Passenger Traffic.	Freight Traffic.	Mails and Express.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1912.				
April.....	12,019 21	16,669 38	2,288 78	30,977 37
May.....	10,236 09	20,463 38	1,926 51	32,625 98
June.....	12,708 51	14,532 03	1,984 52	29,225 06
July.....	21,319 16	14,300 69	7,245 96	42,865 81
August.....	22,389 19	14,613 57	2,365 92	39,368 68
September.....	17,106 28	11,603 46	1,961 43	30,671 17
October.....	17,364 04	18,667 95	1,974 65	38,006 64
November.....	13,105 90	23,816 90	2,059 75	38,981 65
December.....	13,267 26	16,403 74	2,352 85	32,023 85
1913.				
January.....	10,660 24	9,268 55	7,786 27	27,715 06
February.....	8,619 72	8,845 89	2,935 18	20,400 79
March.....	12,552 97	11,162 67	2,896 37	26,612 01
1912-1913.....	171,348 57	180,347 31	37,778 19	389,474 07
1911-1912.....	153,284 42	176,861 68	37,057 29	367,203 39

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CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,

*Accountant and Auditor.*

## PRINCE EDWARD ISLAND RAILWAY.

## PASSENGER STATEMENT.

Months.	Local.		Through.		Total.	
	Number.	Mileage.	Number.	Mileage.	Number.	Mileage.
1912.						
April.....	36,895	653,849	179	7,981	37,074	661,830
May.....	29,374	631,451	750	36,200	30,124	667,651
June.....	29,667	599,362	1,994	97,787	31,661	697,149
July.....	51,378	1,151,785	2,597	121,495	53,975	1,273,280
August.....	44,334	997,440	5,184	252,120	49,518	1,249,560
September.....	39,699	1,044,994	4,646	216,183	44,345	1,261,177
October.....	29,573	578,923	3,161	154,293	32,734	733,216
November.....	33,453	609,086	1,846	87,595	35,299	696,681
December.....	37,468	723,826	967	44,401	38,435	768,227
1913.						
January.....	26,994	544,605	880	40,953	27,874	585,558
February.....	20,907	470,798	254	13,224	21,161	484,022
March.....	31,166	686,410	522	26,009	31,688	712,419
1912-13.....	410,908	8,692,529	22,980	1,098,241	433,888	9,790,770
1911-12.....	366,523	7,808,956	21,553	1,096,081	388,076	8,905,037

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CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,

*Accountant and Auditor.*

PRINCE EDWARD ISLAND RAILWAY.  
FREIGHT STATEMENT.

Months.	1912-13.		1911-12.	
	Tons.	Mileage.	Tons.	Mileage.
April.....	10,921	430,205	7,066	253,279
May.....	14,054	458,414	12,235	448,504
June.....	9,382	382,150	11,033	383,041
July ...	9,441	347,946	9,609	346,961
August.....	9,853	420,406	7,936	300,511
September.....	8,090	297,267	9,479	315,157
October ...	13,794	437,928	16,476	591,483
November...	17,458	593,110	14,727	588,829
December.....	10,788	440,702	8,684	387,231
January.....	5,378	239,614	5,360	253,817
February.....	6,030	250,259	7,436	295,254
March.....	7,595	287,045	10,177	454,714
	122,784	4,585,046	120,218	4,618,781

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CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,  
*Accountant and Auditor.*

## PRINCE EDWARD ISLAND RAILWAY.

DESCRIPTIVE STATEMENT of Freight transported 12 months ended March 31, 1913.

Products of.	Commodity.	Tons.
Agriculture. ....	Grain.....	14,774
	Flour.....	4,192
	Other mill products.....	2,336
	Hay.....	4,089
	Tobacco.....	156
	Cotton.....	60
	Fruit and vegetables.....	12,932
Animals .....	Live stock.....	3,626
	Dressed meats.....	2,757
	Other packing house products.....	2,959
	Poultry, game and fish.....	3,529
	Wool.....	63
	Hides and leather.....	604
	Anthracite.....	373
Mines.....	Bituminous.....	13,356
	Coke.....	1
Lumber .....	Stone, sand and other like articles.....	2,629
	Lumber.....	14,562
Manufactures.....	Petroleum.....	1,684
	Sugar.....	1,010
	Naval stores.....	3
	Iron, pig and bloom.....	581
	Other castings and machinery.....	239
	Iron and steel rails.....	646
	Bar and sheet metal.....	123
	Cement, brick and lime.....	2,346
	Agricultural implements.....	945
	Wagons, carriages, tools, &c.....	296
	Wines, liquors, beers.....	599
	Household goods and furniture.....	751
	Other commodities not mentioned above.....	30,613
	Total weight.....	122,784

E. &amp; O. E.

CHARLOTTETOWN, P.E.I.

W. T. HUGGAN,

*Accountant and Auditor.*

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## PRINCE EDWARD ISLAND RAILWAY.

OFFICE OF THE MASTER MECHANIC,

CHARLOTTETOWN, P.E.I., April 10, 1913.

H. McEwan, Esq.,

Superintendent, P.E.I. Ry.

SIR,—I beg to submit for your information the following statement of the operation of the mechanical department for the year ended March 31st, 1913.

The following is a summary of the principal work performed:—

## LOCOMOTIVES.

Thirteen locomotives received thorough repairs. Eleven locomotives received side and main rod brasses. All the motion and running gear thoroughly examined, staybolts in boilers thoroughly examined, and five hundred and sixteen new staybolts put in boilers.

Six locomotives received specific repairs.

Eight locomotives received new pistons and twelve piston rods. Six tender tanks and six tender frames were largely rebuilt. Three fireboxes were patched. Six cross-heads were made and twelve were tinned and planed. Three engine frames were rewelded.

The following new parts were supplied:—

Twenty truck boxes, twelve driving boxes, six whistles, thirteen pops, twenty pop-valves, twenty-four valve stems, twenty slide valves, three hundred and seventy-five sets metallic packing, twenty cylinder cocks, four blow-off cocks, forty punches, six smoke stacks, six tube expanders, one hundred and twenty-five truck straps, six truck bolsters, forty brass valve spindles, ten valve yokes, twenty check valves, twenty-four taps, eight crank pins, four bell ringers, twenty injector spindles, six steam pipes, six throttle glands and valves, sixteen engine springs, and one driving axle.

One hoisting engine fitted out and thirty injectors repaired.

Seventy-two oil cups, twenty grease cups, twenty piston rod oil cups, twelve slush boxes, twenty-four slide blocks, twenty-six air pump cylinders, sixty brake levers, twenty-five brake jaws, four hundred and fifty brake pins, and two hundred and fifty brake bolts were bored and fitted out. Thirty-four sets driving wheels, thirty sets truck wheels, one hundred and twenty sets steel wheels, and ninety new axles were turned off. One hundred and ten sets wheels were pressed on axles. Five hundred and twenty-six new tubes were welded and put in boilers. Seventy thousand pounds of iron and four thousand, one hundred and fifty-one pounds of steel were forged; four thousand one hundred and sixty pounds of nuts were tapped, and a great deal of running repairs too numerous to mention.

## CAR DEPARTMENT.

Five box cars, five flat cars, one stock car, one snow plough and two engine cabs were rebuilt and charged to renewals.

The following received heavy repairs:—

Twenty-seven first-class cars, fourteen second class cars, ten postal and baggage cars, one hundred and fifty-one box cars, thirty-five flat cars, five snow ploughs, four flangers and one van.

## SESSIONAL PAPER No. 20

The following received light repairs:—

Fourteen first-class cars, seventeen second class cars, thirteen postal and baggage cars, fifty-eight box cars, seventy-three flat cars, one snow plough and four flangers.

Nine cars were resheathed.

Ninety-six oil boxes, twenty-eight brake spindles, twenty-three brake beams, fifty-four sashes, twenty-eight doors, twenty-six truck frames, thirty-eight truck bolsters, ten buffers, five hundred and twenty car frictions, twenty-seven sets car housings and five hundred and forty car castings were made. One hundred and forty-eight wheels, forty-eight new roofs and thirty-four new floors were put on cars.

## BRASS FOUNDRY.

Output: 16,775 pounds of brass castings.

## COPPER SHOP.

Thirty-eight headlights, twenty-nine discharge pipes, ten copper pipes, three elevator pipes, four oil pipes, four injector pipes, twenty-nine train lamps, fifteen station lamps, twelve passenger car lamps, three semaphore lamps, two conductor's lamps, four tank spouts, one pump, four car baskets, one hundred and ninety oil cans and forty-five water cans were repaired.

Eighty-two engine truck funnels, twenty-six wire joints for steam chests, nineteen water glass shields, three feed pipes, four sand pipes, two oil pipes, two smoke stacks, and two zinc boxes for machine shop were made.

Lead lined forty car bearings and zinc-lined seven ice boxes.

Twelve driving boxes, forty truck boxes and four truck brasses were babitted.

Six crossheads and eleven sets rod brasses were tinned.

Copper pipes on twelve engines softened and examined.

Repaired lagging on eighteen boilers and piped from injector to ashpan in twenty-two engines.

## PAINT SHOP.

Thirteen locomotives were painted and varnished.

Fifteen first class cars were cleaned and eleven varnished; two postal and baggage cars were painted, seven cleaned and eight varnished; two second class cars were painted seven cleaned and eight varnished; forty-three box cars were painted, two cleaned and two varnished; one hundred and thirty box car roofs were painted; thirty-five flat cars, eight snow ploughs, four flangers, twenty-three hand cars, one refrigerator car, one oil tank, twenty-five water cans, seventeen loading platforms, sixteen track levels, thirteen outside sashes and eight flag poles were painted. Eight sets outside sashes varnished; three desks, one table and four ticket cases filled and varnished; twenty-nine settees, four tables, fourteen seats, four letter cases, four ticket cases and four desks stained and varnished. Two stations, two offices and Charlottetown station roof painted.

Thirteen sashes glazed, forty-seven sign boards lettered, ninety box cars relettered and three hundred and thirty-six panes of glass put in buildings.

## ROAD AND TRAFFIC DEPARTMENT.

Thirty-four loading platforms, eleven freight trucks, one coal hoist, seven cattle loaders, three sheep loaders, three baggage trucks, thirteen coal boxes, six storage boxes, three clothes boxes, three tool boxes, thirty-two doors, thirteen sign boards, two bill boards, three lamp stands, two grindstone stands, four tables, one telegraph table, four ticket cases, four book cases, four desks, twenty-nine settees, two wheelbarrows, fourteen track levels, twelve switch targets, three ladders, one hundred pocket staples, three post hole diggers, six hundred rail braces, twenty-four gate hinges, forty-seven

4 GEORGE V., A. 1914

cold chisels, forty picks, five switches, sixty switch rods, sixteen switch headers, twenty switch cranks, thirty pairs fish plates, fourteen frogs, thirty-two clawbars, seven push cars, eight windows and sashes, and seven drawers were made.

Eight hand cars were rebuilt. Air compressor thoroughly repaired.

One hand truck, seven freight trucks, four baggage trucks, four hand cars, seven trollies, eight doors, eighty picks, twelve clawbars, sixteen switch cranks and one turntable were repaired.

Steam shovel thoroughly repaired. New tubes in boiler and engine and dipper repaired; also new water tank and smoke stack.

Installed Tignish and Elmira turntables.

On January 1, 1913, an open switch at the oil tanks caused a special train to leave the track, dumping engine No. 25 and cars Nos. 47 and 71 into the ditch. The wreck entailed a cost of \$1,408.50, which is included in working expenses.

I have the honour to be, Sir,

Your obedient servant.

PETER McQUAID,

*Master Mechanic.*

## SESSIONAL PAPER No. 20

## PRINCE EDWARD ISLAND RAILWAY.

STATEMENT showing the number of Locomotives and the various class of Cars and other Rolling Stock on March 31st, 1913.

	Locomotives.	Classification of Cars.																Snow ploughs.	Flangers.	Steam shovel.	Total.
		1st class.	2nd class.	Combined 2nd and baggage.	Postal and smoke-ing.	Combined postal and baggage.	Baggage.	Vans.	Box freight.	Refrigerator cars.	Stock.	Oil tank car.	Hart-Otis convertible cars.	Coal.	Platform.	Total.					
On hand, serviceable, March 31st, 1912	22	19	9	5	4	3	6	3	307	3	28	1	15	12	149	564	10	8	1	19	
Condemned, April 1st, 1912	9	4	4	2	1	1	2	1	6	1	1	1	1	1	5	25	1	1	1	1	
Total Equipment, April 1st, 1912	31	23	13	7	4	4	8	4	313	3	28	1	15	12	154	589	11	8	1	20	
Condemned, April 1st, 1912	9	4	4	2	1	1	2	1	6	1	1	1	1	1	5	25	1	1	1	1	
Condemned during the year	9	4	4	2	1	1	2	1	7	1	1	1	1	1	2	3	1	1	1	1	
Total condemned	9	4	4	2	1	1	2	1	7	1	1	1	1	1	7	28	1	1	1	1	
Less rebuilt during the year									2						3	5					
To be rebuilt or purchased	9	4	4	2	1	1	2	1	5	3	28	1	15	12	4	23	1	1	1	1	
Add serviceable and repairing	22	19	9	5	4	3	6	3	308	3	28	1	15	12	150	566	10	8	1	19	
Total Equipment, March 31st, 1913	31	23	13	7	4	4	8	4	313	3	28	1	15	12	154	589	11	8	1	20	

S. F. HODGSON,

*Mechanical Accountant.*

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## PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of mileage and coal, oil and waste consumed by locomotives for the  
Year ended March 31st, 1913.

—	Locomotive Mileage.	Consumption.				Average Consumption per 100 Miles.			
		Tons of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Waste.	Pounds of Coal.	Pints of Valve Oil.	Pints of Engine Oil.	Pounds of Waste.
1912.									
April. . . . .	37,010	1,110	536	1,008	740	6,718	1'44	2'72	2'00
May . . . . .	38,983	1,093	558	1,128	654	6,280	1'43	2'89	1'67
June. . . . .	41,456	1,132	528	1,160	557	6,116	1'27	2'80	1'34
July. . . . .	45,957	1,166	680	1,468	750	5,681	1'48	3'19	1'63
August. . . . .	46,406	1,126	568	1,360	689	5,436	1'22	2'93	1'48
September. . . . .	44,206	1,241	664	1,296	618	6,288	1'50	2'93	1'40
October. . . . .	47,415	1,316	600	1,340	650	6,217	1'26	2'82	1'37
November. . . . .	40,543	1,223	608	1,140	648	6,757	1'49	2'81	1'42
December. . . . .	38,624	1,155	572	1,100	626	6,698	1'48	2'85	1'62
1913.									
January. . . . .	32,023	990	564	1,072	605	6,925	1'76	3'34	1'89
February. . . . .	30,448	977	388	884	587	7,187	1'27	2'90	1'92
March. . . . .	33,034	1,010	476	956	640	6,848	1'44	2'89	1'93
Totals. . . . .	476,099	13,539	6,742	13,912	7,764	6,370	1'41	2'92	1'63

S. F. HODGSON,  
*Mechanical Accountant.*

## PRINCE EDWARD ISLAND RAILWAY.

Accidents during period ended March 31st, 1913.

Cause of Accident.		PASSENGERS.		EMPLOYEES.		OTHERS.		Total.	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1	Fell from cars or engine. ....	.....	.....	.....	.....	.....	.....	.....	.....
2	Jumping on or off trains while in motion. ....	.....	.....	.....	1	.....	.....	.....	1
3	At work on or near the track making up trains. ....	.....	.....	.....	.....	.....	.....	.....	.....
4	Putting arms or heads out of windows. ....	.....	.....	.....	.....	.....	.....	.....	.....
5	Coupling cars. ....	.....	.....	.....	1	.....	.....	.....	1
6	Collisions or by trains thrown from track. ....	.....	.....	.....	1	.....	.....	.....	1
7	Struck by engines or cars on highway crossings. ....	.....	.....	.....	.....	.....	.....	.....	.....
8	Walking, standing, lying, sitting or being on track. ....	.....	.....	.....	.....	.....	.....	.....	.....
9	Explosions. ....	.....	.....	.....	.....	.....	.....	.....	.....
10	Striking bridges. ....	.....	.....	.....	.....	.....	.....	.....	.....
11	Other causes. ....	.....	.....	.....	19	.....	.....	.....	19
Total. ....		.....	.....	.....	22	.....	.....	.....	22

CHARLOTTETOWN, P.E.I.,  
June 4th, 1913.

PRINCE EDWARD ISLAND RAILWAY.  
Details of Accidents for the period ending March 31st, 1913.

Date.	Name, address and occupation of persons.	Place of accident.	Cause.	Nature and extent of injury.
1912.				
April 30.	Charles McLean, sectionman, Charlottetown.	Charlottetown.	Rail fell on foot.	Bruised foot.
May 27.	Archibald McKay, storeman, Charlottetown.	"	Fell coming out of lumber warehouse.	Injury to knee.
June 5.	Frank Dorsey, cleaner, Charlottetown.	Along line of Ry.	Shaker bar in engine slipped.	Injury to side.
" 11.	Arthur J. Harper, brakeman, Charlottetown.	Vernon.	Squeezed between cars.	Injury to ribs.
July 1.	Lemuel Ferguson, labourer, Charlottetown.	Charlottetown.	While working on roof of machine shop fell through smoke stack.	Injured leg and back.
" 15.	William Bell, cleaner, Charlottetown.	"	While cleaning on engine accidentally drove a piece of steel through his wrist.	Wrist injured.
" 27.	M. S. Lee, sectionman, Vernon River.	Vernon River.	While breaking off track bolt nut flew and struck him on shin bone.	Leg injured.
Aug. 12.	Duncan D. McDonald, section foreman, Georgetown.	Georgetown.	While alighting from train foot slipped.	Sprained knee badly.
" 28.	James Mallard, labourer, Elmira.	Elmira.	While operating track lifter.	Smashed thumb.
Sept. 3.	James Lee, sectionman, Charlottetown.	Charlottetown.	Rail fell on foot.	Foot badly bruised.
" 20.	John Stewart, brakeman, Georgetown.	Georgetown.	While loading baggage caught finger between car door and trunk.	Finger badly bruised and lacerated.
Oct. 21.	John O'Neil, labourer, Charlottetown.	Charlottetown railway yard.	Fell while tipping coal tubs.	Ankle sprained.
" 17.	Harry Mallard, labourer, Elmira.	Elmira.	While unloading rails.	Fingers bruised.
Nov. 14.	Hugh McLeod, extra gang foreman, Bradalbane.	Harmony bridge.	Slipped on side of bank.	Knee sprained.
Dec. 6.	Joseph Power, labourer, Charlottetown.	Charlottetown freight shed.	While attending furnace.	Face burned.
" 9.	James A. O'Brien, labourer, Charlottetown.	Charlottetown.	While splitting wood axe glanced.	Part of toe severed.
" 14.	Frank J. Cameron, cleaner, Charlottetown.	Charlottetown round house.	While turning table foot caught between rail of table and rail of pit.	Foot bruised.
1913.				
Jan. 7.	P. E. Dorsey, engine driver, Charlottetown.	Charlottetown, upper St. Peter's road, near crossing.	Train went off the track.	Side injured.
" 16.	John Kelly, cleaner, Charlottetown.	Charlottetown round house.	While turning off light fell into pit.	Side and leg injured.
" 27.	John McEachern, carpenter, Charlottetown.	Bedford.	While cutting hole in roof of station slipped.	Injured testicle.
Feb. 12.	Thomas Sweeney, porter, Charlottetown.	Charlottetown.	Frozen quarter of beef fell on foot in freight shed.	Bruised foot.
Mar. 13.	Joseph Clark, carpenter, Charlottetown.	Charlottetown carpenter shop.	While sawing boards set screw on counter shaft caught clothing.	Leg injured.

CHARLOTTETOWN, P.E.I., June 2nd, 1913.

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# INTERCOLONIAL AND PRINCE EDWARD ISLAND RAILWAYS EMPLOYEES' PROVIDENT FUND.

## SIXTH ANNUAL REPORT.

MONCTON, N.B., May 30, 1913.

To all Officers and Employees, Contributors to the above fund:

GENTLEMEN,—By instruction of the Provident Fund Board we beg to submit for your information the following report of the operations of the Provident Fund for the fiscal year ended March 31, 1913.

The personnel of the Provident Fund Board for that year was as follows:—

D. POTTINGER, Assistant Chairman, Government Railways Managing Board.  
Chairman, Moncton, N.B.

T. C. BURPEE, Engineer of Maintenance, I.C.R., Moncton, N.B. } Appointed  
D. McDONALD, Superintendent I.C.R., Levis, Que. } (By the Minister.

WILLARD P. HUTCHINSON, Train Despatcher, I.C.R., Truro, N.S. } Elected by the  
W. MILLEDGE THOMPSON, Conductor, I.C.R., Moncton, N.B. } Employees.

Four regular meetings of the Board, as required by the regulations, were held during the year.

The following is a statement of the receipts and expenditures during the year ended March 31, 1913:—

Balance at the credit of the fund on March 31, 1912.....	\$309,234 71
The contributions made by employees during the year, being one and one-half per cent of their monthly salary and wages were.....	\$85,365 23
The contributions made by the railways of an equal amount during the same period, were.....	85,365 23
	<hr/>
	170,730 46
Amount received for refunds, &c .....	2,146 00
Interest accrued (at three per cent).....	*9,350 20
	<hr/>
	\$491,461 37

The expenditures were—

For retiring allowances.....	\$133,539 69
For contributions refunded in cases of deceased employees.....	2,738 91
For contributions refunded, which were deducted in error.....	455 58
For contributions refunded to discharged employees....	167 10
Medical examinations for probationers entering service..	3,128 00
Medical examinations for employees retiring from service.....	86 00
For election expenses .....	467 12
For salaries and travelling expenses, secretary's office....	4,068 30
For Board members—Time lost and travelling expenses..	126 99
For stationery, printing, postage, &c., &c.....	655 11
	<hr/>
	\$145,432 80

Balance to the credit of the fund on March 31, 1913... .. \$346,028 57

The following statement shows the amount which was contributed by the railways, and the amount which was contributed by the employees to the Provident Fund, in each fiscal year, since the fund has been in operation. It also shows the number of employees retired, the number of deaths among the same, and the amount paid for

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retiring allowances in each year. The average amount of the retiring allowance, paid in the month of March in each year, is also shown. \*\$511 of this amount was earned last year, but was not credited until this.

For Fiscal Year.	Amount contributed by Railways.	Amount contributed by Employees.	No. of Employees placed on Fund.	No. of retired Employees died.	Amount Paid for Retiring Allowances.	Average monthly Allowance paid in March.	Balance at credit of Fund.
	\$ cts.	\$ cts.			\$ cts.	\$ cts.	\$ cts.
1907-8.....	82,707 74	82,707 74	142	11	23,913 04	25 49	139,249 21
1908-9.....	75,306 41	75,306 41	88	17	64,067 63	25 63	225,898 31
1909-10.....	69,949 70	69,949 70	168	17	103,628 20	26 30	255,585 08
1910-11.....	71,296 42	71,296 42	51	23	121,014 34	26 56	273,480 01
1911-12.....	81,119 81	81,119 81	29	23	125,131 32	26 04	309,234 71
1912-13.....	85,365 23	85,365 23	63	36	133,539 69	26 78	346,028 57

It will be noted by the above statement of receipts and expenditures that the amount of the contributions received from the railways and from the employees during the year were..... \$170,730 46

And that the expenditures were..... 145,432 80

Surplus of contributions over expenditures..... \$25,297 66

The gross surplus, including interest, to the credit of the fund on March 31, 1913, was..... \$346,028 57

The Act provides that two members of the Provident Fund Board shall be elected annually, and it was therefore necessary in January, 1913, to arrange for the election of these two members to serve during the year ending March 31, 1914.

Notice calling for the nomination of candidates was accordingly posted as required by the rule, and the election was held in February, 1913.

The two members elected were—

WILLARD P. HUTCHINSON, Train Despatcher, I.C.R., Truro, N.S.

BLISS A. BOURGEOIS, Chief Clerk I.C.R., Moncton, N.B.

An order of the Governor-General in Council was passed on May 5, 1913, dissolving the Government Railways Managing Board, and appointing Mr. F. P. Gutelius, General Manager of Government Railways, so that from that date Mr. D. Pottinger ceased to be the chairman of the Provident Fund Board.

The personnel of the Board as at present constituted is as follows:—

F. P. GUTELIUS, General Manager, Canadian Government Railways, Chairman, Moncton, N.B.

T. C. BURPEE, Engineer of Maintenance, I.C.R., Moncton, N.B. } Appointed  
D. McDONALD, Superintendent, I.C.R., Lévis, Que. } by the Minister.

WILLARD P. HUTCHINSON, Train Despatcher, I.C.R., Moncton, N.B. } Elected by the  
BLISS A. BOURGEOIS, Chief Clerk, I.C.R., Moncton, N.B. } Employees.

D. POTTINGER,  
Chairman.

W. C. PAVER,  
Secretary.

Honourable FRANK COCHRANE,  
Minister of Railways and Canals,  
Ottawa, Ont.



## PART IV

### Report of the Government Chief Engineer of the Western Division of the National Transcontinental Railway

MR. COLLINGWOOD SCHREIBER, C.M.G.



*Office of the General Consulting Engineer to the Government and Chief Engineer of the Western Division of the National Transcontinental Railway.*

OTTAWA, CANADA, March 31, 1913.

SIR,—I have the honour to submit my annual report for the fiscal year ended the 31st of March, 1913, on the progress made with the construction of the Western Division of the Grand Trunk Pacific railway.

WESTERN DIVISION.

This division extends westward from the western boundary of the Winnipeg terminals to the City of Prince Rupert, the Pacific terminus.

For construction purposes, this division is divided into two sections, viz.:—

The 'Prairie Section,' extending from Winnipeg to Wolfe Creek, 915 miles in length.

The 'Mountain Section' commencing on the east bank of Wolfe Creek and extending to zero on the Grand Trunk Pacific Railway Company's dock at Prince Rupert, a distance of 830 miles.

PRAIRIE SECTION.

This section, though not absolutely completed according to contract, has continued to be successfully operated for public traffic for the entire year, which has been a great boon to the general public and to the settlers along the line of road.

The principal work executed during the year has been the maintenance and repairs of the buildings, structures, roadbed and permanent way. The works of construction, under the usual acceptation of the term, that have been done are the addition of three and four stalls, respectively, to the round houses at Melville and Watrous for the accommodation of the branch line engines. The erection of:—

4 freight sheds,	1 section house,
3 tool houses,	6 store houses,
2 station houses,	3 loading platforms.
3 stock yards,	

Improving the water service, the laying in of a few sidings and a small amount of bringing up to grade embankments that have settled or slid out.

The western approach to Winnipeg and the line through Edmonton are in the same condition as described in my annual report for the fiscal year ended the 31st of March, 1912. At neither of these points have the Grand Trunk Pacific Railway Company built a through trunk line, but I understand they are seeking legislation during the present session of Parliament to legalize agreements which they have entered into with the Canadian Northern Railway Company for the joint use of the tracks, etc., of the two companies at both points, and to accept such joint use as a compliance with the requirements of their charter and their agreement with the Government by which they were obligated to build a through line from Moncton to the Pacific coast.

MOUNTAIN SECTION.

The progress made with the construction of this section has been most unsatisfactory and disappointing. This, it is alleged by the Grand Trunk Pacific Railway

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Company, is due to the unsettled condition of the labour market and to unforeseen difficulties that have arisen in connection with the transport and distribution of supplies and plant along the work, and I am assured that every effort possible has been made to procure labouring men, by having paid agents in the various towns on the lookout to secure them and by the conveyance of labourers over the Grand Trunk Pacific Railway to the works of construction, free of charge.

As regards the distribution of supplies and plant, I am aware that from 600 to 700 teams were engaged on this service during the winter season, and that the contractors built two large passenger and freight steamers at Tete Jaune Cache for service between that point and Fort George, but owing to the unusually light fall of snow in the Rocky Mountain in the winter of 1911-12, the river water subsided so rapidly that after three weeks service the steamers were put out of commission instead of being available for several months. Fortunately, on the east end of the Mountain section, during the winter season, supplies and heavy plant such as steam shovels, dinky engines and muck waggons had been taken in by sleighs over the ice down the Fraser River, otherwise the work would not even be as far advanced as it is.

On the western end of the road, the Grand Trunk Pacific Railway Company ascribe the slowness of progress to the dilatory manner in which the erection of the steel bridges proceeded; the work of tracklaying being delayed, causing much longer haul by team over very bad roads, at great cost, not less than 93 cents per ton per mile.

The present condition of the work may be summarized as follows:—

*From mile 0—Wolfe Creek—to mile 210—the crossing of the Rau Shuswap River.*—The grading, bridging and tracklaying are practically completed. On this distance, the road for 180 miles has received a good lift of ballast. Upon this section, the following buildings have been erected:—

22 way station buildings,	1 freight house,
2 section houses,	2 divisional stations,
23 tool houses,	2 round houses,
2 machine shops,	1 carpenter shop,
2 coaling plants,	4 water services.

Regular traffic trains are being operated over this 210 miles.

*From mile 210—Rau Shuswap River Crossing—to mile 245—Goat River Crossing.*—The grading and wooden bridges are about 95% completed and the erection of the steel bridge over the Rau Shuswap River will be completed about the 15th of April, proximo, when the tracklaying will be continued with only short interruptions, to the crossing of the Goat River, at which point it will be held up whilst the steel superstructure of this bridge is being erected.

*From mile 245—Goat River Crossing—to mile 275—second crossing of the Fraser River.*—About 48% of the grading is done, not including the 2,200 foot tunnel at mile 268, of which only 420 feet has been driven. The character of the material met with in driving this tunnel is a very wet greasy clay which is causing much trouble, but as a temporary line has been built around the tunnel, no delay will occur at this point to the tracklaying, which will probably reach the second crossing of the Fraser River by the 1st of July, 1913.

*From mile 275—Goat River Crossing—to mile 362—at Fort George.*—The work of clearing the right of way is far advanced towards completion. The grading has been opened up at a number of points, but only a small amount of it has, so far, been done; however, the winter season is being taken advantage of in rushing in supplies

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and plant with a view of prosecuting the work with vigour as soon as the spring opens.

*From mile 362—at Fort George—to mile 500—Burns lake.*—No work of grading has been done, but the clearing of the right of way is practically completed.

*From mile 500—Burns Lake—to mile 570—Bulkly Summit.*—About 35% of the grading has been executed, and the clearing of the right of way completed.

*From mile 570—Bulkly Summit—to mile 632—the crossing of Boulder creek.*—The grading is practically completed and the piles for the wooden bridges are driven.

The necessity for awaiting the construction of several steel bridges will, however, delay the tracklaying, as the erection of the steel superstructures can only be proceeded with as the track reaches in sequence each bridge.

*From mile 632—crossing of Boulder creek—to mile 830—zero on the Grand Trunk Pacific Railway Company's wharf at Prince Rupert.*—The grading, bridging and tracklaying are practically completed. A lift of ballast has been laid from mile 655 to mile 830—at Prince Rupert—175 miles, and the following buildings have been erected between mile 649 and mile 830:—

22 way station houses.	1 divisional station house.
22 latrines.	1 section house.
27 tool houses.	1 bunk house.
5 water services.	2 dock warehouses.

Upon the mountain section up to this date, there have been 13 tunnels driven, aggregating about 9,000 feet in length; 7 wooden snow-sheds have been built, of an aggregate length of 1,700 feet, and the following steel bridges have been erected, the figures show the number and length of the spans in each case:—

Wolf creek, 2 x 60 feet, 2 x 40 feet, 3 x 150 feet.  
 McLeod river, 2 x 70 feet, 2 x 40 feet, 4 x 210 feet.  
 Prairie creek, 9 x 50 feet, 5 x 70 feet.  
 Rocky river, 1 x 225 feet.  
 Athabasca river, 3 x 225 feet.  
 Snaring river, 2 x 225 feet.  
 Miette river—No. 1—1 x 90 feet.  
 “ “ 2—1 x 125 feet.  
 Boulder creek, 1 x 60 feet.  
 Grant's creek, 1 x 66 feet.  
 Moose river, 1 x 125 feet.  
 Fraser river No. 1—1 x 40 feet, 1 x 70 feet, 1 x 175 feet.  
 Glazier creek, 1 x 90 feet.  
 McLennan's creek, 2 x 70 feet, 1 x 100 feet.  
 Sand creek, 1 x 125 feet.  
 Rau Shuswap river, 1 x 30 feet, 7 x 40 feet, 9 x 60 feet.  
 Porphyry creek, 5 x 40 feet, 9 x 70 feet.  
 Mud creek, 5 x 40 feet, 6 x 60 feet.  
 Skeena river, 3 x 70 feet, 3 x 240 feet.  
 Ecstews river, 1 x 175 feet.  
 Kitsumkaylum river, 1 x 225 feet.  
 Ex-chom-siks river, 1 x 225 feet.  
 Zim-a-cord river, 1 x 225 feet.  
 Ka-its-siks river, 1 x 225 feet.  
 Zanardi rapids, 3 x 55 feet, 2 x 125 feet, 1 x 225 feet.

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I may here mention that public traffic trains are being operated from mile 649—New Hazelton—to mile 830—Prince Rupert—greatly to the accommodation of the residents along this section of road.

To summarize:—Of the 830 miles—the length of the Mountain section—the grading on 443 miles is practically completed; 408 miles of track laid; 355 miles have received a good lift of ballast, and on 391 miles public traffic is being conducted.

From mile 190 to mile 620, a very stiff indurated clay has been met with, for the greater part very wet, so much so that in many instances it is found to be impossible to hold it within the limits of the embankment, and it has, in many cases, slid out, carrying the original surface of the ground with it, and again in other cases, it lies in ledges as hard as solid rock, and is costly to handle. Such, I consider, under the specification, should be classed as solid rock. Both characteristics of this material have caused a considerable increase in the cost of the work, and have materially delayed its progress.

## EXPENDITURE UP TO 31ST MARCH, 1913.

The expenditure on the 'Prairie section,' . . . . .	\$35,894,376 91
Certified expenditure on the 'Mountain section'..	50,232,556 34
	<hr/>
	\$86,126,933 25

The difference of expenditure on the 'Prairie section' up to March 31, 1912, and the expenditure up to March 31, 1913, is composed for the most part of interest on bonds.

I have the honour to be, sir,  
Your obedient servant,

COLLINGWOOD SCHREIBER,  
*Chief Engineer, Western Division, N. T. Ry.*

PART V

QUEBEC BRIDGE RECONSTRUCTION

REPORT OF CHAIRMAN OF BOARD OF ENGINEERS



DEPARTMENT OF RAILWAYS AND CANALS,  
BOARD OF ENGINEERS, QUEBEC BRIDGE,  
MONTREAL, August 27, 1913.

SIR,—I beg to report progress of work on the re-construction of the Quebec bridge for the fiscal year ending March 31, 1913, as follows:—

*Substructure.*—Fairly good progress was made on the construction of the masonry during the past year, although the work was delayed to a certain extent by extremely wet weather and strikes. Particular attention was paid during this season to the sinking of the caisson for the south main pier, and at the close of the season it was successfully sunk to bed rock some 86 feet below the bed of the river or 102 feet below extreme high water. The caisson was filled with concrete from elevation 1.0 to elevation 75.0, where the granite shaft of the pier will start. The material encountered during sinking was mainly sand with a sprinkling of boulders, and no serious difficulty was encountered during the entire operation.

The work on the south anchor pier consisted in excavating for the foundations. The borings at this point showed a shaley rock close to the surface and it was thought that a substantial foundation could be reached with little or no excavation. It was found, however, that there were pockets of clay and rotten shale, which necessitated one corner of the foundation being carried down nearly 30 feet below the surface of the ground. Satisfactory foundations were finally reached, however, and everything will be ready for an early start in the spring.

On the north side, the north intermediate pier, supporting the approach spans, was started early in the spring and has been entirely completed.

Work on the foundation of the north anchor pier was carried on during the greater part of the season. The rock foundation at this point shelved off very sharply and it was necessary to construct a coffer dam, as the site of this pier is below high water mark. Satisfactory foundations were uncovered, however, about the last of October, and before the season ended some eleven courses of masonry had been laid, amounting to about 6,800 cubic yards.

The work on the north main pier was also rushed ahead as fast as possible, but the work on this pier was delayed more than on the others on account of the difficulty in getting stone and by a strike of the stone cutters. The two caissons, however, were connected by concrete and steel arching and the shaft of the pier carried up to elevation 99.0 or 2 feet below extreme high water.

The status of the work up to March 31, 1913, is as follows:—

Structure.	Required.	Completed.	Remaining.	% Completed.
	C. yds.	C. yds.	C. yds.	C. yds.
North abutment.....	375	375	.....	100
North intermediate pier.....	1,666	1,666	.....	100
North anchor pier.....	17,736	6,806	10,930	39
North main pier.....	31,860	26,633	5,227	84
South main pier.....	38,269	27,893	10,376	73
South anchor pier.....	16,128	492	15,636	3
South abutment.....	26	.....	26	.....
Total.....	106,060	63,865	42,195	.....

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All the difficult work necessitating caissons and compressed air has been completed; the remainder of the work to be done is above high water and will present no problems, and, as a result, will be carried on much more rapidly than the work so far engaged in. It is expected, unless something unforeseen happens, that all the masonry will be completed during the season of 1913.

*Superstructure.*—During the past year the contractor for the superstructure has constructed a large plant at Rockfield for the purpose of fabricating steel required for the bridge. This shop is specially designed for handling the large members, most of the machinery and handling apparatus having been specially designed for this purpose. It is expected that when the shop staff gets fully organized that they will be able to turn out in the vicinity of 2,000 tons of finished bridge members per month. Actual manufacturing was started in February.

The following is a statement of the progress of manufacturing up to the end of March:—

	Tons.
Material ordered from the mills. . . . .	8,000
Material received from the rolling mills, Pittsburgh. . . . .	5,750
Material completely fabricated in the shops. . . . .	1,400
Material shipped to the bridge site. . . . .	800
Material erected. . . . .	370

The detail shop plans have progressed to such a stage that they are well ahead of the requirements of the shop.

Preparations are being made at the bridge site to start foundations for their crane runways and falsework in order that an early start may be made in the spring.

*Removal of unused material.*—The contract for the removal of the unused material at Belair and Chaudiere Curve was awarded to R. W. Mayer of St. John, N.B., and up to the end of March he has removed and paid for some 4,000 tons, being about one-third of the total quantity to be removed.

*Tests.*—During the past year the St. Lawrence Bridge Co. have made a series of tests at the laboratories of the Phoenix Bridge Co. under the supervision of the Board of Engineers. Some of these tests members were constructed to conform with the type of members being used in the design of the bridge, while others were tested to determine the actual relation between nickel and carbon steel. The results of these tests have shown that the members as designed are able to develop the strength called for by the specifications used in designing the bridge.

All of which is respectfully submitted.

C. N. MONSARRAT,  
*Chairman and Chief Engineer.*

Hon. FRANK COCHRANE,  
Minister of Railways and Canals,  
Ottawa, Ont.

## PART VI

## REPORT OF THE CHIEF ENGINEER OF THE DEPARTMENT

AND

Reports of Canal Superintending Engineers and Superintendents,  
Chief Engineer, Hudson Bay Railway, and Engineer  
in charge Dartmouth-Deans Branch, I.C.R.

FOR THE YEAR 1912-13.

Ernest Marceau, Superintending Engineer, Quebec Canals.

C. D. Sargent, Superintending Engineer, Ontario-St. Lawrence Canals.

W. H. Sullivan, Superintending Engineer, Welland Canal.

J. W. LeBreton Ross, Superintending Engineer, Sault Ste. Marie Canal.

F. B. Fripp, Engineer-in-Charge, Sault Ste. Marie Canal.

A. T. Phillips, Superintending Engineer, Rideau Canal.

A. J. Grant, Superintending Engineer, Trent Canal.

J. H. McClellan, Superintendent, Trent Canal.

C. D. Sargent, Engineer-in-Charge, St. Peter's Canal.

J. Armstrong, Chief Engineer, Hudson Bay Railway.

J. L. Weller, Engineer-in-Charge, Welland Ship Canal.

W. A. Hendry, Engineer-in-Charge, Dartmouth-Deans Branch I.C.R.



## OFFICE OF THE CHIEF ENGINEER.

OTTAWA, ONT., April 1, 1913.

SIR,—I have the honour to submit my annual report for the fiscal year ending March 31, 1913.

Attached hereto will be found the annual reports of the Superintending Engineers of the several canals, the Engineer-in-Charge of Improvements at Sault Ste. Marie, the Superintendent of the Trent canal, the Engineer-in-Charge of the Welland ship canal, the Chief Engineer of the Hudson Bay railway and the Engineer-in-Charge of the Dartmouth branch line, Intercolonial railway.

## CANALS.

The through water route between Montreal, at the head of ocean navigation, and Fort William and Port Arthur, on the west shore of Lake Superior, comprises 74 miles of canal with 48 locks and 1,155 miles of river and lake waters, or a total of 1,229 miles, the minimum depth of water being 14 feet. From Montreal to Duluth, at the south west of Lake Superior, the total distance is 1,354 miles, and to Chicago 1,286 miles. A summary of this route will be found in Part VII with details of the several works. At Port Arthur and at Fort William (about six miles apart), the Canadian Pacific railway gives connection westward and with the south at Fort William. A line of railway has been built from Fort William by the Grand Trunk Pacific railway to give communication with the Transcontinental railway and over that road from Winnipeg.

On this through route the approaches to the canals and the channels through the intermediate river reaches are well defined, and are lighted with gas buoys under the control of the Department of Marine and Fisheries, admitting of safe navigation in the hands of competent pilots, both by day and night. In the cases of the Sault Ste. Marie, the Welland, the Cornwall, the Soulanges and the Lachine canals, they are well lighted throughout with electricity and are electrically operated. The Farans Point canal is lighted with acetylene gas.

Of the minor systems, the Murray, Trent, Rideau and Ottawa River canals may be considered geographically as branches from the through route. In operation, however, these canals serve a distinct traffic of a more local nature. Isolated from these above mentioned systems, the navigation of the Richelieu river and Lake Champlain is effected by the St. Ours lock and the Chambly canal; while, in the far east, the Bras d'Or lakes of Cape Breton are made accessible from the Atlantic by the St. Peter's canal.

Detailed information respecting the several canals is contained in an appendix.

The work executed during the past year has been almost wholly of the nature of improvements and repairs to existing works, the exception being in the case of the Trent canal, where the construction of an extension of the present system to an outlet on Lake Ontario is in progress.

## LACHINE CANAL.

On the Lachine canal the principal items of work have been the continuation of the rebuilding of the slope and vertical walls with concrete in the reach above Cote St. Paul lock, near Rockfield; the completion of the substructure of the Rockfield bridge and the erection of a Strauss bascule bridge with a 165 foot span; the installation of additional life protection devices consisting of iron ladders, fences, &c., and the

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dredging and various minor repairs necessary as more particularly described in the Superintending Engineer's report herewith attached.

## SOULANGES CANAL.

On the Soulanges canal the work of removing projections from the slopes and lining the latter with concrete was continued and is now completed, at any rate for the present. Further dredging was done at the site of the extension of the guard pier into Lake St. Francis. Ordinary repairs to locks, canal slopes, ditches, fences, &c., were carried out.

## CORNWALL CANAL.

On the Cornwall canal, besides executing various repairs and renewals, a contract was let for the improvement of the lower entrance to lock 15. The work principally consists of the construction of new cribwork and concrete north and south entrance walls.

## WILLIAMSBURG CANALS.

Construction on the long entrance pier below the Farrans Point lock, which will ensure safe navigation to upbound vessels through the treacherous eddy at this point, was continued.

At Morrisburg (Rapide Plat canal) the improvement of the lower entrance to lock 24, by widening and straightening the channel and constructing a timber and concrete approach wall on the north side of the entrance, was continued and is nearing completion.

At lock 28, Galops canal, the improvement of the upper entrance by the construction of a timber and concrete approach wall in the south side was completed and the work has already proved of great benefit to vessels using this lock.

## MURRAY CANAL.

On the Murray canal, the dredging of certain high areas was continued and is practically completed.

## WELLAND CANAL.

Messrs. Hogan and Macdonell's contract for improving the Port Colborne entrance was completed. A contract was entered into with M. J. Hogan for the removal of the old east entrance pier at Port Colborne, the extension of the east dock and the excavation of the entrance in front of the latter. This work is now in progress and the depth of water afforded will meet the requirements of the new ship canal.

## PORT COLBORNE ELEVATOR.

As detailed in the Superintending Engineer's report, attached hereto, the government elevator handled 11,600,000 bushels of grain, as compared with 7,000,000 bushels in 1911, and 4,000,000 in 1910, and its net surplus in earnings for the season was over \$28,000. This is a most satisfactory increase in business. The present elevator capacity is 800,000 bushels and a contract has been let, and is now under way, for the erection of an addition to the elevator which will provide a storage capacity of 2,000,000 bushels.

## WELLAND SHIP CANAL.

Preparation of contract plans for this large work was carried on all year and tenders will shortly be called for. An interesting description of the ship canal route and general arrangements is given in the report of the Engineer-in-Charge, attached hereto.

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## SAULT STE. MARIE CANAL.

The extension, 300 feet in length, to the north entrance pier, for which a contract was let in 1911, was completed, and better accommodation for vessels is thus provided.

The work of widening the lower entrance channel on both the north and south sides was commenced and completed during the season.

The traffic statistics of both the Canadian and American canals show a large increase over last year or any previous year. The freight tonnage through the Canadian canal amounted to 39,664,874 tons, an increase of 28 per cent; passengers numbered 37,753, a decrease of 2 per cent, and the registered tonnage totalled 25,789,654 tons, an increase of 33 per cent.

## RIDEAU CANAL.

Many repairs and renewals were carried out on this canal as detailed in the Superintending Engineer's report, attached hereto. The unusual rainfall during the whole season ensured a satisfactory depth of water for navigation, a rather unusual condition, as, during the later part of ordinary seasons, there is usually insufficient water owing to the limited area of the watershed upon which the canal is dependent for its water supply.

## TRENT CANAL.

On the Trent canal, upon which new construction is in progress, the extent under operation remains the same as in the previous year, namely 160 miles, extending from Lake Simcoe to Healey Falls, a point sixteen miles below the village of Hastings. Owing to the unprecedented rainfall during the whole season, it was practically impossible to regulate the flow of water and many complaints of land flooding arose therefrom.

A considerable amount of repairs and improvement was executed upon the completed portion of the canal.

The construction of the Burleigh Falls dam was completed, as was the Rosedale section, consisting of a new canal cut across the narrow peninsula between Cameron and Balsam lakes, the construction of a new lock and dam, and the dredging of channels at the entrances.

Plans and specifications are in course of preparation for new dams at Nassau and Fenelon Falls.

The work of water conservation for the canal system by rebuilding and repairing the dams on the various northern tributary waters of the canal watershed has received careful attention.

## ONTARIO-RICE LAKE DIVISION.

The construction of the Ontario-Rice Lake division is dealt with in an interesting and comprehensive report of the Superintending Engineer, which will be found in the appendices hereto.

This division, which extends from Trenton, on Lake Ontario, to Rice Lake, is 56½ miles in length and is divided for construction purposes into seven sections, all of which are under contract. It follows the River Trent and will comprise 9½ miles of canal, 13 miles of subaqueous channels, and 34 miles of deep river. The total rise between low water level on Lake Ontario and normal navigation level on Rice Lake is 369 feet, to be overcome by 18 locks. The river and canal levels will be controlled by 14 dams, and 18 bridges are required, all of which, except one, will be swing or bascule spans. Up to end of fiscal year, 16 locks, 10 dams, and 12 bridges have been built. The locks are concrete, with 8 feet 4 inches of water on the sills; they are 175 feet long between the hollow quoins and 33 feet wide, accommodating barges of 1,000

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tons, about 150 feet long and 30 feet beam, drawing 8 feet of water. The work involved requires the removal of about 1,500,000 cubic yards of earth, 1,250,000 cubic yards of rock, loose and solid, and the building of about 400,000 cubic yards of concrete. The approximate cost is set down at \$6,750,000, of which the estimated value of the seven contracts for the seven sections totals \$5,100,000 on which there has been expended for work done and material delivered up to March 31, 1912, the sum of \$3,503,422.18, or about 70 per cent of the estimated value at contract rates of the seven contracts. Details of the work done will be found in the above mentioned report of the Superintending Engineer.

## HOLLAND RIVER DIVISION.

The government decided to abandon further work on this division, and accepted a surrender of the York Construction Company's contract on December 31, 1911. A special agreement was entered into with the York Construction Company for the execution of certain unavoidable work required before operations could be finally abandoned, and this work was completed in June last.

## LAKE SIMCOE—GEORGIAN BAY DIVISION.

A thorough survey of the Severn river is under way with a view to preparing plans and specifications for canalizing the river to the same dimensions as the Ontario-Rice Lake division.

## HYDROGRAPHIC SURVEYS.

Surveys are being carried on intermittently with the object of making a complete and reliable set of charts of the chain of lakes which form part of the Trent navigation. So far, very little of the field work has been plotted.

## ST. PETER'S CANAL.

The construction of the new lock and entrance at the Atlantic end of the canal was proceeded with during the season without any interference with the navigation of the canal. The progress made on this work was disappointing, principally due to the continued extremely wet weather.

## HUDSON BAY RAILWAY.

Contracts were let during the year for sections 2 and 3 to Mr. J. D. McArthur, thus placing under contract the whole line from The Pas to the Hudson Bay terminus, Port Nelson—420 miles.

At the end of this fiscal year, grading has been practically completed from The Pas to Mile 70 and clearing to Mile 185.

The bridge across the Saskatchewan river, at The Pas, consisting of four fixed spans of 147 feet in length each and a swing span of 262 feet in length, is rapidly nearing completion, the erection of the superstructure being well advanced.

A survey and engineering party went in to Port Nelson by Steamer Beothic last summer for the purpose of surveying, investigating and preparing preliminary designs of harbour development at this port. This party is engaged on this work at present.

## DARTMOUTH BRANCH LINE.

This line from Dartmouth, N.S., to Upper Musquodoboit is 67 miles long and is under contract for construction to M. P. & J. T. Davis. Clearing was finished in 1912 and grading has been carried on at some ten or more points on the whole line where

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the work was the heaviest. The progress made has been fair considering the difficulty experienced of an extremely wet season.

## NORTHUMBERLAND STRAITS CAR FERRY.

A contract was let during the year to the Sir W. G. Armstrong, Whitworth Company of Newcastle-on-Tyne, England, for the construction of an ice breaking car ferry steamer to run between Cape Tormentine, N.B., and Carleton Point, P.E.I., a distance of 8 miles.

Plans have been prepared for harbour works, landing piers, &c., at these points and tenders are now being called for by advertisements for the same.

In addition to the supervision of the works of construction and operation, numerous investigations of a technical nature have engaged the attention of the members of this branch. These investigations arise from damage claims, the submission of plans affecting property or interests of this department, applications for leases, railway inspections for subsidy and guarantee bond purposes, &c.

I have the honour to be, sir,

Your obedient servant,

W. A. BOWDEN,  
*Chief Engineer.*

A. W. CAMPBELL, Esq.,  
Deputy Minister,  
Department of Railways and Canals,  
Ottawa, Ont.

## DEPARTMENT OF RAILWAYS AND CANALS.

## QUEBEC CANALS,

## SUPERINTENDING ENGINEER'S OFFICE.

MONTREAL, August 12, 1913.

SIR,—I have the honour to submit herewith my annual report on the works under my charge, for the fiscal year ended March, 1913.

This division comprises the Lachine and Soulanges Canals on the St. Lawrence route; the Ste. Anne, Carillon & Grenville Canals, on the Ottawa River and the St. Ours and Chambly Canals on the Richelieu river.

Of these the Lachine is by far the most important owing to immediate connection with the Harbour of Montreal.

## LACHINE CANAL

Length  $8\frac{1}{2}$  miles, total rise 45 feet, 5 locks 270 ft. x 45 ft. with 14 ft. on sills, 5 old locks 200 ft. x 45 ft. with 9 ft. of water on sills, still available to navigation.

## REPAIRS AND RENEWALS.

Besides the usual maintaining of the canal structures in good condition throughout the year, the following special items of work were performed.

*Spare lock gates.*—All the spare lock gates, which are kept underwater, were raised and put ready for emergency.

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*Mooring posts.*—100 old wooden mooring posts were removed and replaced by heavy cast iron posts set in concrete bases.

*Walls.*—A piece of wall on the north side of the upper entrance above old lock No. 5, was practically rebuilt.

*Concrete work.*—A number of broken coupling stones on locks Nos. 1 and 2 were raised and replaced by blocks of reinforced concrete. A concrete retaining wall was built at the northeast corner of Black's bridge. Concrete sidewalks were laid at both ends of bridges Nos. 4 and 5. A ramp leading into St. Gabriel shed No. 4, was overhauled, the sidewall rebuilt with concrete and the roadway paved with granite blocks resting on a concrete foundation.

*Buildings.*—The Statistical Officer's office at lock No. 2, was remodelled, the walls burlapped and painted. A hot water furnace was also installed in it.

*Life protection devices.*—A permanent iron fence, set in concrete, was erected from the north end of Black's bridge to a point opposite the lower entrance to south lock No. 2. Another was set in the masonry at the south corner of lock No. 2. Similar fences were placed around the northeast and northwest corners of North Basin No. 1.

One hundred iron ladders were placed in the concrete and stone walls in the eastern division of the canal, the total number of such ladders at present installed is 887. They are formed of 9, 10 or 11 rungs.

Ninety-five life-saving sets, consisting of a wooden buoy, a rope 50 ft. long and a pole 22 ft. in length with a three prong grappling iron attached, were placed at various points along the entire length of the canal during the year.

*Bridge gates.*—Drop gates were installed at both ends of bridges Nos. 1, 2, 4 and 5.

#### OPERATION.

This canal was unwatered on the 1st, and re-opened for navigation on the 28th April, 1912. It was closed for the winter on the 5th December last.

Navigation was interrupted twice during last season, on account of accidents to lock gates.

At 5 p.m. on the 18th June, 1912, the SS. *Zapotee*, while being locked through lock No. 4, broke her moorings and, colliding with the south upper gate, threw it down. Repairs were completed the following day at 7 a.m.

Another accident took place on the 24th September last, at 5.45 a.m., when the S.S. *Nevada*, westward bound, collided with the lower gates of lock No. 3, causing serious damage to them. Another vessel, going in the same direction was in the act of going out of the lock at the time. She was carried down, stern first through the lock into the reach below. Neither of the vessels was seriously injured.

A new pair of gates were in working order at 1.30 p.m. on the 26th, navigation having been interrupted, as far as the larger craft were concerned, during 55 hours.

#### CAPITAL.

*Concrete vertical walls.*—This work which has been proceeding for several years, was continued by Messrs. Haney, Quinlan & Robertson, during last summer. Some 6½ miles of walls had been laid at the expiration of the contract, on the 1st December, 1912.

A new contract for the balance of the work was awarded to Messrs. Hugh Quinlan, Angus W. Robertson & Roger Miller, on the 1st April, 1913.

*Bascule bridge at Rockfield.*—This bridge, which is of the bascule type, is now practically completed. Its span is 165 ft. and provision has been made for a double track of street railway over it.

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The concrete substructure was done under contract by Messrs. Haney, Quinlan & Robertson and the superstructure manufactured and erected by the Dominion Bridge Co.

*Improvements at lock No. 4.*—This work consists of removing a portion of the south bank forming an outward curve above lock No. 4, building a new power station, &c.

Some land required for the improvements having only been secured towards the end of the last fiscal year, nothing could be done during 1912-13, but at the time of writing, the work is well under way.

## DREDGING.

The dredging fleet came out of winter quarters on the last day of April, 1913, and two days later, was engaged removing stone blasted off the banks of the canal near the Canadian Pacific railway swing span at Lachine. The vessels left for the head of the Soulanges canal on the 1st of June and resumed work in connection with the protection works at that point.

Some dredging was also done in connection with the concrete lining of the Soulanges canal slopes between locks Nos. 3 and 4.

On the 15th October, the fleet returned to the Lachine where it was engaged dredging at various points until it went into winter quarters on the 23rd November.

## REPAIRS TO VESSELS.

The Quebec Canals Dredging Fleet comprises two tugs, the *Frank Perew* and the *Carillon*, one steam spoon dredge, one steam derrick, two dump scows, thirteen flat scows and a floating storehouse.

The machinery in both the tug *Frank Perew* and the steam dredge and the hulls and decks of most of the other vessels were carefully overhauled and repaired during last winter.

## SOULANGES CANAL.

Length 14 miles, 5 locks 270 x 45 feet, 15 feet of water on the sills, total rise 84 feet.

## REPAIRS AND RENEWALS.

*Locks.*—The stony sluices of lock No. 1 were taken out during the winter and the tracks and rollers renewed.

*Cast-iron mooring posts.*—Twenty of the mooring posts between locks Nos. 4 and 5, which had been displaced by vessels' lines, were dug out and the concrete blocks in which they are set increased in size.

*Ditches.*—3 miles of ditches were deepened during last summer, viz:—1 mile on the south bank below lock No. 3 and 2 miles between St. Emmanuel bridge and lock No. 5.

*Canal slopes.*—A considerable quantity of stone from the canal quarry was placed on the slopes to replace the original stone lining which is gradually falling down to the bottom of the canal.

*Fences.*—3 miles of fence were renewed between St. Dominique bridge and lock No. 4.

*Range lighthouse.*—One of the range lighthouses at the foot of the canal, which had become out of plumb, was reset and its base strengthened.

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*Painting.*—The following structures were painted during the year:—Bridge on the road from Cascades Pt. to Vaudreuil, fences at the upper entrance, the outside of the Overseer's house, 4 range light houses, the inside of the Statistical Officer's office and also all the electric line posts, 150 in number.

*Derricks.*—Two hand derricks of over 5 ton capacity were built for the purpose of handling the steel stop logs provided during the year.

## OPERATION.

Navigation was conducted without any interruption on this canal during last season.

A collision took place on September 9, 1912, between the steamer *Dundurn* and the steamer *Port Colborne* in the vicinity of the St. Dominique swing bridge. As a result of it the *Dundurn* struck the pivot pier of the bridge with such force as to tilt several inches; the superstructure was also considerably damaged. However, owing to the fact that the swing was almost fully open at the time, the channel was not blocked and navigation went on uninterruptedly.

## CAPITAL.

The syphon culvert which passes the waters of Rivière a la Grasse under the Soulanges canal, having been made too small to quickly let these waters through in times of flood, a number of small bridges on adjoining farms had been destroyed. Five of them were replaced during the year. The abutments are made of concrete and the floor consists of iron beams supporting a reinforced concrete slab.

*Steel stop logs.*—Eighteen trussed steel stop logs were purchased last year for lock No. 1, in anticipation of heavy repairs to be done in connection with the sill and gates of this lock and also for future use in case of a break. They are calculated to resist, with safety, the pressure of 26 feet of water.

*Stopping leaks and trimming slopes.*—Messrs. Haney, Quinlan & Robertson resumed work on this contract on June 13, 1912, and ceased operations on the 26th October following, having during that period lined 6,770 lineal feet of slope.

The whole of the lining was done on the south side, the really dangerous sections of which have now been made safe. The various sections thus treated aggregate 22,409 feet in length. This work may be considered finished for the present, but, eventually it will become necessary to continue it on account of the gradual washing away of the soft clay forming the slopes, by the waves created by passing vessels.

*Protection works at upper entrance.*—At the end of last year, the contractors had not yet commenced operations. As for the dredging in connection with this contract, it is being done by the department. Our dredge No. 2 was at work here for a month or so and our clam shell dredge about twice as long. The total quantity of material removed from the channel was about 8,000 cubic yards.

## STE. ANNE'S LOCK.

Length  $\frac{1}{2}$  mile, one lock 200 x 45 feet, 9 feet of water on the sills. Old lock still available 200 x 45 feet, 6 feet of water on the sills.

## REPAIRS.

Nothing but ordinary repair work was done here during the year. The banks of both entrances, the locks and lock gates, the two piers of the south channel and the

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mooring pier at Ile aux Tourtes, the Superintendent's and Statistical Officers' houses, &c., received the necessary attention.

OPERATION.

Navigation was not interrupted here during the season.

Owing to the very heavy increase in the lockages through the single lock here, due to the passage of a large number of barges bringing sand from the lake of Two Mountains to Montreal, and also to motor boats running up and down between this lake and lake St. Louis, it has become imperative to install electric motors for the operation of the lock gates.

An amount will be placed in the estimates next session for the purpose.

CARILLON AND GRENVILLE CANALS.

*Carillon Canal*.—Length  $\frac{3}{4}$  mile, two locks 200 x 45 ft., 9 ft. of water on the sills, total rise, 16 ft.

*Grenville Canal*.—Length  $5\frac{3}{4}$  miles, five locks 200 x 45 ft., 9 ft. of water on the sills, total rise  $43\frac{3}{4}$  ft.

REPAIRS AND RENEWALS.

Besides keeping the locks, buildings, roads, &c., in good repair, very little was done here under the above head during the last fiscal year.

The only item worth mentioning was the taking apart and rebuilding of two pairs of spare gates for lock No. 2 and lock No. 5 respectively.

INCOME.

*Carillon Dam*.—On account of high water it has been found impossible to undertake the lengthening of the apron of a section of this dam during the last fiscal year. Most of the timber required has, however, been purchased, and it is the intention to begin the work as soon as the condition of the river will permit.

ST. OURS LOCK.

Length  $\frac{1}{2}$  mile, one lock 200 x 45 feet, 7 feet of water on the sills, rise 5 feet.

REPAIRS.

Under this head there is nothing to record, except the maintaining of the structures in good repair.

INCOME.

*Removing boom piers*.—The three last remaining cribwork piers along the east side of the lower entrance were removed last fall and piles driven on their sites for the foundation of the proposed new concrete piers. Owing, however, to the continued high water, nothing further could be done. This work will be completed during the fall of 1913.

CHAMBLY CANAL.

Length 12 miles, 9 locks 118 x  $22\frac{1}{2}$  feet,  $6\frac{1}{2}$  feet of water on sills, total rise 74 feet.

REPAIRS AND RENEWALS.

The most important items of work done under this head during the last fiscal year were:—1st, the renewal of the bottom of locks Nos. 2 and 4, the old planking

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being removed and replaced by concrete; 2nd, the cleaning, by the sand blasting process of three steel swing bridges; 3rd, the completing of the lodgings of the keeper of bridge No. 3; 4th, the installation of two electric motors, one of 40 horsepower in the sawmill and the other of 10 horsepower to run our large wood planer.

## INCOME.

*New electric station.*—As reported last year, this station was fully completed and equipped with the exception that the switchboard had not been received.

The lighting of the canal with incandescent, instead of arc lamps, has proved a success. There are 268 60 c.p. lamps, placed about 400 feet apart in the reaches, 2 at each bridge and 4 at each lock.

*St. Johns wharf.*—The new wharf built here in 1911 was partly filled in last year with material dredged out of the canal entrance and from the bed of the river in front of the wharf.

The work will be completed in 1913.

*Dump scow and spare gates.*—A small dump scow of some 50 cubic yards capacity and a pair of spare gates were constructed at our own shops during last winter.

## OPERATION.

This canal was opened to navigation from May 1 to December 1, 1912, without interruption.

## BEAUHARNOIS CANAL.

## REPAIRS.

*Hungry Bay Dyke.*—This dyke and the highway on top of it have been carefully maintained during last year, and about 100 tons of crushed stone placed along it for future repairs.

## INCOME.

*Removal of obstruction in the Lost Channel.*—The remains of the stone piers of an old bridge, which formerly spanned the Lost Channel between the mainland and the Grand Isle de Beauharnois, near St. Timothy, and which was replaced by a steel span built by the Department fifteen years ago, were removed last summer.

The disappearance of those obstructions will prevent ice jams, which were a danger to the present bridge every spring. It has already proved beneficial to the mills using this channel as a tail-race.

*Lake St. Francis.—Protection of shores.*—Owing to the scant fall of snow in the beginning of last winter, it was impossible to haul stone for this work until February, 1912, and work could only be carried on up to the last week in March. During that period, protection walls were built as follows:—south shore, 2,500 lineal feet, north shore, 1,620 lineal feet.

*Hungry Bay Dyke Road.*—The section of this road extending from the western limit of the town of Valleyfield and the eastern end of Hungry Bay, some 3500 feet in length, was macadamized during the summer and fall of 1912, the crushed stone being supplied under contract by Mr. V. Lamothe and the preparing of the road bed, the spreading and rolling of the metal being done by days' labour.

## SURVEYS AND INSPECTORS.

The general plan of the upper section of the Soulanges Canal has been completed and the balance of this plan is now ready to ink in.

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During last summer, a survey of the Government property from the head of the Beauharnois Canal to Knight's Point on Lake St. Francis, was also made and plotted.

CANAL STORES.

The inspector of canal stores in this Division reports a marked improvement in the bookkeeping at all our stores. The stocks have been considerably reduced and the methods now followed in receiving materials and delivering them out of the stores make for economy and the prevention of waste.

The works under the head of Capital and Income, on the Lachine Canal, are under the immediate supervision of Lt. Col. H. R. Lordly, C.E., and Mr. L. S. Pariseau, C.E., is in charge of Capital and Income work on the other canals in this Division.

I have much pleasure in stating that both of them, and the engineers under them, have discharged the duties entrusted to them during last year in a manner creditable to themselves and very satisfactory to me.

I have the honour to be,

Sir,

Your obedient servant,

ERNEST MARCEAU,

Suptg. Engr. Quebec Canals.

W. A. BOWDEN, Esq.,

Chief Engineer, Railways and Canals,  
Ottawa, Ont.

LACHINE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of new lock No. 1 at lower entrance and new lock No. 5 at upper entrance during the fiscal year ending March 31, 1913.

Months.	New Lock No. 1, Lower Sill.				New Lock No. 5 Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	37	0	21	5	18	11	14	8
May.....	23	6	19	0	19	11	18	0
June.....	23	7	18	2	20	10	17	8
July.....	18	2	15	10	17	8	16	3
August.....	16	2	15	2	16	4	15	9
September.....	15	8	15	1	16	0	15	8
October.....	16	7	14	5	16	5	15	2
November.....	19	1	15	9	17	10	15	6
December.....	18	11	16	0	17	4	15	6
1913.								
January.....	31	8	16	9	19	1	15	9
February.....	34	5	29	1	17	5	15	8
March.....	38	10	27	0	19	10	15	5

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## SOULANGES CANAL.

STATEMENT showing the depth of the river water on the mitre sill of lock No. 1 at lower entrance and lock No. 5 at upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 1, Lower Sill.				Lock No. 5, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	22	3	19	9	17	8	16	0
May.....	22	2	19	4	18	2	17	0
June.....	22	2	19	2	18	2	17	3
July.....	18	11	17	0	17	3	17	0
August.....	18	1	17	7	17	0	16	9
September.....	17	8	17	6	16	9	16	9
October.....	18	2	17	3	16	9	16	6
November.....	19	2	17	9	18	0	16	3
December.....	18	9	18	1	16	7	17	2
1913.								
January.....	20	9	18	5	18	0	16	6
February.....	21	4	20	0	18	0	16	8
March.....	22	5	20	0	18	4	16	8

## CHAMBLY CANAL.

STATEMENT showing the depth of the river water on the mitre sills of lock No. 9 at lower entrance and lock No. 1 at Upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 9, Lower Still.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	22	0	13	2	13	6	9	7
May.....	17	3	15	0	12	7	11	2
June.....	17	1	12	11	12	1	9	11
July.....	12	7	10	1	10	1	8	5
August.....	10	8	9	2	8	10	7	9
September.....	11	4	9	11	8	8	7	9
October.....	12	4	10	5	9	2	7	11
November.....	14	8	11	8	10	0	8	8
December.....	13	10	11	5	10	9	9	2
1913.								
January.....	15	10	10	9	10	5	9	2
February.....	15	7	13	8	10	5	9	3
March.....	21	2	12	0	13	10	9	0

ST. OURS LOCK.

STATEMENT showing the depth of the river water on the mitre sills of the St. Ours lock during the fiscal year ending March 31, 1912.

Months.	Lock No. 1, Lower Sill.				Lock No. 1, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April . . . . .	24	7	12	6	19	8	9	8
May . . . . .	17	4	13	11	13	7	11	11
June . . . . .	17	6	11	6	13	7	10	5
July . . . . .	11	2	8	8	10	7	9	0
August . . . . .	9	4	7	8	9	10	8	4
September . . . . .	8	9	7	7	10	6	9	9
October . . . . .	10	2	7	1	11	4	10	0
November . . . . .	12	9	9	0	12	10	11	1
December . . . . .	13	0	9	10	11	11	9	2
1913.								
January . . . . .	16	4	10	11	12	6	9	0
February . . . . .	15	0	12	6	11	0	10	0
March . . . . .	22	3	13	6	17	3	9	7

CARILLON CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 1 at lower entrance and Lock No. 2 at upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 1, Lower Sill.				Lock No. 2, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April . . . . .	18	0	12	5	17	7	10	3
May . . . . .	20	0	16	8	19	10	16	0
June . . . . .	20	3	15	6	19	10	15	4
July . . . . .	15	4	13	1	15	3	12	4
August . . . . .	13	2	12	5	12	3	11	7
September . . . . .	12	8	12	5	11	9	11	5
October . . . . .	14	0	11	11	13	6	10	3
November . . . . .	15	11	13	7	15	4	13	5
December . . . . .	15	4	13	6	17	2	13	6
1913.								
January . . . . .	14	8	13	5	19	4	12	5
February . . . . .	14	8	13	7	16	9	13	2
March . . . . .	19	9	14	1	16	10	12	0

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## GRENVILLE CANAL.

STATEMENT showing the depth of the river water on the mitre sills of Lock No. 3 at lower entrance and Lock No. 7 at upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 3, Lower Sill.				Lock No. 7, Upper Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	21	8	14	5	18	10	10	3
May.....	24	8	20	6	21	4	17	8
June.....	26	9	18	0	21	5	16	2
July.....	18	6	15	1	15	11	12	6
August.....	15	1	14	2	12	7	11	9
September.....	14	4	13	11	11	11	11	0
October.....	16	7	13	8	14	0	11	1
November.....	18	11	16	4	16	7	14	0
December.....	19	11	16	1	14	6	12	10
1913.								
January.....	22	2	15	4	13	11	12	7
February.....	22	8	17	3	13	2	11	10
March.....	24	2	17	6	19	0	11	6

## STE. ANNE'S LOCK.

STATEMENT showing the depth of the river water on the mitre and mud sills of Ste. Anne's Lock, at the lower and upper entrance during the fiscal year ending March 31, 1913.

Months.	Lock No. 1, Lower Mitre.				Lock No. 1, Mud Sill.			
	Highest.		Lowest.		Highest.		Lowest.	
1912.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
April.....	14	2	10	2	15	11	10	11
May.....	15	8	13	0	17	8	14	11
June.....	15	10	12	7	17	10	13	11
July.....	12	5	11	3	13	8	11	9
August.....	11	11	10	9	11	8	11	2
September.....	10	11	10	9	11	4	11	2
October.....	11	4	10	4	12	7	10	10
November.....	12	8	11	2	14	3	12	6
December.....	12	6	11	4	13	5	12	0
1913.								
January.....	13	7	11	2	12	11	11	9
February.....	12	11	11	5	12	5	11	10
March.....	15	6	11	8	16	9	12	0

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STATEMENT showing the date of closing and opening of the Quebec canals for season of 1912-13.

Name.	Opening.	Closing.
Lachine Canal .....	May 1, 1912.	December 5, 1912.
Soulanges Canal .....	April 23, 1912.	" 6, 1912.
Chambly Canal .....	May 1, 1912.	November 30, 1912.
St. Ours Lock .....	May 1, 1912.	" 30, 1912.
C. & G. Canals .....	May 1, 1912.	" 30, 1912.
Ste. Anne's Lock .....	April 25, 1912.	" 30, 1912.

W. A. BOWDEN, Esq., C. E.,  
 Chief Engineer,  
 Department of Railways and Canals,  
 Ottawa, Ont.

## DEPARTMENT OF RAILWAYS AND CANALS.

## ONTARIO—ST. LAWRENCE CANALS,

## SUPERINTENDING ENGINEER'S OFFICE,

CORNWALL, April 1, 1913.

SIR,—I have the honour to submit my annual report on the maintenance and operation of the Ontario-St. Lawrence Canals for the fiscal year ending March 31, 1913.

The Ontario-St. Lawrence Canals comprise the Cornwall, Farran's Point, Rapide Plant and Galops Canals, the North Channel below Prescott, on the St. Lawrence Route, and the Murray Canal between the head of the Bay Quinte and Brighton Bay on the north shore of Lake Ontario.

## CORNWALL CANAL.

The Cornwall Canal was opened for navigation on April 29, and closed December 10th.

*Accidents.*—On Monday evening, May 27, the Imperial Oil Company's steam barge *Imperial*, downbound, entered Lock No. 17 at too high a rate of speed and carried away both lower gates. The rush of water from the upper level carried out both upper gates, breaking the fastenings to lock walls. The spare gates, which are stored in the river at the foot of old canal, were carried out into deep water by the flood from above, rendering them difficult of access, and this fact and the necessity of removing a very large quantity of gravel from lock, coupled with extremely bad weather conditions, rendered the work of repair unusually slow, and navigation was not resumed till Friday afternoon, May 31st.

On June 5th, the steamer *India*, belonging to The Calvin Co., downbound, collided with the south lower gate of lock No. 20, forcing the gates apart about three feet at the top and very nearly carrying them out.

The upper gates were speedily closed and the water lowered in lock. The damaged gate, which was badly strained, was taken out, examined, and resteped, and again brought into use. Navigation was interrupted about 10 hours.

## RENEWALS AND REPAIRS.

The masonry coping on south side lock No. 15 was lifted, reset, and reinforced behind with concrete throughout its entire length.

The coping of masonry approach wall west of the Cornwall bridge on the south side of canal was reinforced behind with concrete for a length of 650 feet.

While the canal was unwatered in the month of April, 675 lineal feet of riprap west of Cornwall bridge on the north side was rebuilt and faced with concrete.

Eight iron mooring posts set in concrete were placed along the south of basin between locks 15 and 17, and six on the south bank above lock No. 18.

A pile and timber approach to dock at Mille Roches was constructed to aid vessels in approaching and leaving this dock. The work was done by the canal repairs staff.

A steel highway bridge was constructed under contract with the Hamilton Bridge Works Co., and placed in position across old lock No. 17 to replace the old wooden pontoon bridge, which had reached a stage beyond repair.

A new wooden pontoon, 30 ft. x 20 ft., was constructed by the canal repairs staff for the purpose of lifting out the bridge to admit vessels to the repairing basin below. It is very satisfactory.

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The work of enlarging and improving the repairing basin between old locks No. 16 and No. 17, commenced in 1911, was completed during the summer of 1912.

This basin now has a total area for the docking of vessels of 260 feet x 300 feet, and is greatly appreciated and constantly used by owners of vessels of all descriptions in need of repair.

The four gates badly damaged by str. *Imperial* were rebuilt and are being held in readiness as spare gates for locks No. 15 and No. 17.

The lower gates of lock No. 20, damaged by str. *India*, were taken out on November 18, and replaced with the spare gates.

The damaged gates were placed in repair basin and thoroughly overhauled and repaired during the winter.

Spare gates for locks No. 18 and No. 20 were thoroughly repaired and painted.

The seven new automatic emergency gates for the supply weir at the Guard Gates, which were constructed about a year ago, will be placed in position before the opening of navigation this month. The gates are constructed of oak timbers reinforced with steel I-beams.

The buildings at all of the locks throughout the canal received one coat of paint.

Ordinary repairs to lock gates, structures of all kinds, and rip-rap, were carried out during the year, as well as the cleaning of ditches, cutting of weeds, &c.

*Improvements.*—A contract was entered into with Mr. G. R. Phillips in June, 1912, for the improvement of the lower entrance to lock No. 15.

The work consists of the removal of the old north entrance wall below the lock for a distance of about 300 feet, and the construction of a new cribwork and concrete entrance wall, 570 feet in length, on a new location, the rebuilding of the lower wing walls of lock and also the tearing down and rebuilding of the south entrance wall.

The work when completed will provide a safer and easier approach to the canal from the river and provide increased harbour room without interfering with the channel now used by vessels passing down the river.

## THE WILLIAMSBURG CANALS.

The Williamsburg canals were opened for navigation on April 29, and closed on December 13, and were operated throughout the season without serious damage and without any delay to navigation.

*Accidents.*—The steamer *McVittie*, owned by the Ogdensburg Coal and Towing Company, struck the south wall at the lower entrance to lock No. 23, Rapide Plat canal, on September 12, displacing the coping stones for a length of about 80 feet.

The sum of \$200 has been deposited by the owners of this vessel to cover cost of repairs, which will be made before the opening of navigation this month.

The location of the entrance piers to this lock, coupled with the strong and variable current in the river, make this lock difficult of approach under a proper rate of speed and frequent collisions with the entrance walls result.

*Renewals and repairs.*—Forty-nine iron mooring posts, set in concrete bases, were placed along both sides of lock No. 22, Farran's Point canal, and the old wooden posts removed. Fourteen posts of the same description were also placed along the south side of lock No. 28, Galops canal.

Stop logs were provided and placed in the north wheel pit of town power house at Iroquois, and the wheel pit pumped out to enable town to make extensive repairs to water wheel.

Six reinforced concrete culverts were constructed over the government ditch west of Iroquois to replace old wooden bridges badly decayed.

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The upper gates of lock No. 27, Galops canal, were taken out, before opening of navigation, and replaced with a new pair.

A new floor was placed on the large supply weir at this lock.

The upper gates of lock No. 28, which had been removed after the close of navigation in 1911 and repaired during the winter, were placed in position before the opening of navigation.

Two watering places for cattle were constructed at the north channel below Prescott to compensate farmers for being deprived of access to the river for this purpose by the construction of this work.

Ordinary repairs to gates, lock houses, bridges, weirs and riprap were attended to, as well as the cleaning of ditches and cutting of grass and weeds, &c.

#### FARRAN'S POINT CANAL—IMPROVING LOWER ENTRANCE.

Work upon this contract, which was entered into with the Randolph MacDonald Co., Ltd., on the 22nd May, 1911, and which provides for the extension of the north-east entrance pier a distance of 1,140 feet, was commenced on the 17th June, 1911, and continued throughout the following winter.

In the spring of 1912, a large number of concrete blocks were made, but, owing to the extremely high water in the river, the work of levelling cribs to receive the concrete walls was not commenced till the latter part of August, after which date the work was vigorously prosecuted and good progress was made. During the past winter a portion of the top of old cribwork was removed and the work of levelling and repairing this old cribwork to receive concrete walls was commenced on March 15th, and is still in progress. The work on this contract will be completed before the end of the present season.

#### RAPIDE PLAT CANAL—IMPROVING LOWER ENTRANCE TO LOCK NO. 24.

Work on this contract, which was entered into with Messrs. Roger Miller & Sons on September 2nd, 1911, was commenced on September 28th, 1911, and continued without interruption till January 17, 1912, when it was closed for the season.

Work was resumed on April 15th, 1912, and good progress was made throughout the season.

The work as designed comprises the widening and straightening of the canal immediately below the lock and the construction of a timber and concrete approach wall on the north side of the lower entrance to lock. With the exception of the dredging, the work is nearing completion, and it is confidently expected that the whole of the works embraced in this contract will be completed by the end of the present season.

#### GALOPS CANAL—IMPROVING UPPER ENTRANCE TO LOCK NO. 28.

Work on this contract, which was entered into with the Randolph MacDonald Co., Ltd., on June 30, 1911, was commenced in July, 1911, and finally completed in a satisfactory manner on October 26, 1912.

The work as originally designed provided for the construction of a timber and concrete approach wall on the south side of the upper entrance to Lock No. 28, used by all down bound vessels of too great a draft to pass through the Galops rapids. Later it was considered prudent to reduce the length of this wall by about 200 feet, owing to leaks developing in the canal bank where it joined the old river shore. The condition of the bank at this point was such as to cause some apprehension as to its security.

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but by the exercise of constant care and watchfulness the work was successfully carried to completion.

The final estimate for this work has been paid.

The work has proved very beneficial to vessels using this lock and has been highly commended by vesselmen.

The position of this lock, which is open to the river at each end, and unprovided with guard gates which can be used when a down bound vessel is entering lock, made it imperative that some means be provided for closing the lock in the event of an accident to the gates.

A contract was accordingly entered into with the Dominion Bridge Company for the construction of three steel lattice box girders designed to be placed, in case of emergency, in the stop log checks at the head of lock, and supply support for a timber dam. These girders have been constructed and delivered, but machinery for handling them has not yet been installed.

## MURRAY CANAL.

The Murray canal was opened for navigation on April 22, and closed on December 16.

*Accidents.*—On August 18, barge *Recruit* loaded with stone, in tow of str. *John Rolph*, west bound, collided with canal dock near Smithfield road bridge, tearing a large hole in starboard bow and sinking her on the spot. Both boats were owned by the Pointe Anne Quarries, Limited, of Toronto.

After inspection by owners it was decided best to blow her up and remove her by dredging. This was accordingly done.

No delay was occasioned to navigation and no damage was done to dock at time of collision. Some damage was done to dock during the work of removing barge, and the cost of necessary repairs was paid by owners of vessel.

*Renewals and repairs.*—All of the swing bridges on this canal received one coat of paint. Necessary repairs were made to riprap, roads on canal banks, fences and gates. All of the catch water and off-take ditches were kept clean and in good repair, and minor repairs were made to bridges and houses. The barn at foreman's house received much needed repairs and was also painted.

*Improvements.*—A contract was entered into with Messrs. S. McLellan and J. Whitley on October 19th, for the erection of a bridgetender's residence at the C. O. railway bridge.

Work on this contract was immediately commenced and carried to completion in a very satisfactory manner on January 19th, 1913.

The final estimate for this work has been paid.

A contract having been awarded the MacDonald Contracting Co., Limited, for the removal of certain high areas in the bottom of this canal, work was commenced on October 4th and continued until November 29th, when it was closed for the season. There still remains of this work a small area at the east end of the canal to be covered and some boulders to be removed west of the Brighton Road bridge, and this work will be completed early this season.

Payment for this work was made by the hour for the plant employed and the work was diligently prosecuted and carried on in a very satisfactory manner by the contractor.

A survey is now in progress with a view to ascertaining the extent and cost of the work necessary to provide a navigable depth of 14 feet in this canal at low water stage in Lake Ontario. As originally designed and constructed, this canal provided for a depth of 11 feet only at the low water stage of Lake Ontario.

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The large increase of traffic through this canal during the past four years and the increasing number of vessels of the larger class using this waterway would seem to warrant the deepening of this canal to permit vessels using it to load to St. Lawrence canals draft and vessel owners are urgent in their demands that this be done.

Attached are statements of fines and damages collected and record of highest and lowest water in river at each of the canals.

I have the honour to be,

Sir,

Your obedient servant,

C. D. SARGENT,

*Superintending Engineer.*

W. A. BOWDEN, Esq., C.E.,

Chief Engineer, Department of Railways and Canals,  
Ottawa, Ontario.

STATEMENT of Fines and Damages in connection with 'Ontario-St. Lawrence Canals' during Season of 1912.  
CORNWALL CANAL.

Lock.	Date.	Name of Vessel.	Damage.	Fine.	Name of Owner.	Remarks.
	1912.		\$ cts.	\$ cts.		
17	May 27	Steamer Imperial	8,015 36	100 00	Imperial Oil Co	Paid.
20	June 5	Steamer India	712 36	40 00	Calvin Co.	"
17	" 12	Steamer Black Rock		10 00	Pendleton Bros.	"
15	Aug. 12	Barge Ungava			Montreal Transportation Co.	"
18	Sept. 16	Steamer McVitie	26 10		Ogdensburg Coal & Towing Co	"
WILLIAMSBURG CANAL.						
23	Sept. 12	Steamer McVitie	200 00	25 00	Ogdensburg Coal & Towing Co	Paid.
25	Nov. 12	Steamer Edwards	(Estimated).	20 00	Ottawa Transportation Co.	"
MURRAY CANAL.						
	Aug. 17	Barge Recruit	142 86		Point Anne Quarries Co.	Paid.

RECORD of Highest and Lowest Levels of Water on the 'Ontario-St. Lawrence Canals' for the Year ending March 31, 1913.

Months.	CORNWALL CANAL.			FARRAN POINT CANAL.			RAPIDE PLAT CANAL.			GALOPS CANAL.			LIFT LOCK.	MURRAY CANAL.						
	Lock 15.		Lock 21.	Lower Lock 22.	Upper Lock 22.	Lock 23.		Lock 24.	Lock 25.	Lock 27.	Lock 28.									
	High.	Low.				High.	Low.					High.	Low.		High.	Low.	High.	Low.		
1912.																				
April.....	21.6	15.7	16.9	14.8	18.9	16.7.	19.2	17.0	18.4	15.7	17.6	15.0	21.6	17.8	17.0	14.6	18.0	14.5	13.9	12.6
May.....	17.1	15.7	16.9	16.6	19.2	18.2	19.7	18.4	18.9	17.7	18.3	16.7	21.8	20.5	17.0	16.3	18.3	17.6	14.7	13.7
June.....	17.1	16.1	17.2	16.8	19.3	18.7	19.8	19.1	19.0	18.3	18.8	17.9	22.2	21.4	18.0	17.0	19.0	18.0	14.8	14.4
July.....	16.1	15.8	16.9	16.4	18.9	18.4	19.4	19.0	18.6	18.0	18.3	17.1	21.6	20.8	17.4	16.3	18.2	17.5	14.4	13.9
August.....	15.9	15.6	16.9	16.1	19.0	18.2	19.2	18.4	18.5	17.7	18.0	17.3	21.3	20.5	16.8	16.4	18.0	17.0	14.1	13.7
September.....	16.0	15.5	16.4	15.8	18.7	17.9	18.8	18.1	18.2	17.4	17.5	17.0	20.8	20.0	16.4	16.0	17.4	17.0	13.9	13.5
October.....	16.3	16.0	16.4	15.7	18.7	17.7	18.8	17.9	18.0	17.2	17.7	16.8	20.9	19.8	16.8	15.6	17.6	16.6	13.5	13.0
November.....	15.8	15.2	16.5	15.2	18.6	17.3	18.9	17.6	18.5	17.1	17.8	15.8	20.9	18.8	16.4	15.2	17.4	16.8	13.9	13.0
December.....	15.9	15.2	16.6	15.7	18.9	17.7	19.2	18.0	18.7	16.9	18.1	16.3	21.5	18.8	17.0	15.8	18.0	16.8	13.8	13.2
1913.																				
January.....	17.9	15.4	17.0	15.1	19.0	17.6	19.3	17.9	18.7	17.0	18.1	16.0	21.8	19.0	17.0	15.3	18.0	16.3	14.3	13.3
February.....	30.9	16.5	17.5	15.7	19.6	17.9	20.0	18.1	19.4	16.9	17.7	16.0	22.4	19.0	18.0	15.5	19.0	16.5	14.2	13.7
March.....	28.7	17.7	17.5	15.5	19.6	18.0	20.0	18.2	19.2	17.0	18.6	16.6	22.0	19.8	17.5	15.3	18.9	16.3	14.8	13.6

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## WELLAND CANAL.

SUPERINTENDING ENGINEER'S OFFICE,  
ST. CATHARINES, July 19, 1913.

SIR,—I have the honour to report upon the maintainance and the operation of the Welland Canal and its branches for the fiscal year ending March 31, 1913.

## NAVIGATION SEASON.

The canal opened for navigation on April 22 and closed December 19, 1912.

## ACCIDENTS.

On the 20th June, 1912, the steamer *La Canadienne*, bound up, carried away the four gates of lock No. 22. Three children who were standing on the bank below were swept by the rush of water into the side pond and were drowned. Repairs to the lock were quickly made, four spare gates being placed and navigation resumed in eighteen hours. The steamer, which was badly damaged, sank in the level below and was raised on June 25th by the canal repair staff and placed in dry dock at Port Dalhousie.

Another serious accident occurred on August 2, 1912, when the steamer *W. M. Egan*, bound up, collided with the head gates of lock 23. All four gates were carried out. They were replaced by spare ones and navigation resumed in twenty-two hours.

On August 16, 1912, what might have proved a very serious accident was averted by the Gowan Safety Device, installed at lock No. 24. The steamer *Packer*, moving with considerable speed, collided with the head gates, which, but for the device, would have been carried out. One gate was badly twisted and the hanging gear broken. Temporary repairs were made and navigation resumed after four hours' delay. Later on the damaged gate was replaced by a spare one.

The steamer *Samuel Marshall*, up bound, on November 1st, carried away the upper gates at lock 13. Spare gates were placed and navigation resumed after fifteen hours' delay.

## SLIDES.

During low water in February, two slides occurred on the Summit Level, one about 700 feet long on the west side of the canal, about one-half mile north of Welland aqueduct, and the other on the east side of the canal at the south end of the Deep Cut. Arrangements have been made with M. J. Hogan to have these removed sufficiently to provide safe navigation before the opening of the canal.

## IMPROVEMENTS.

A contract was entered into with Messrs. James Battle and N. W. Gowan, for the supply of steel castings forming the Gowan Safety Device. Sufficient were supplied to equip five locks, and it is the intention to equip five more this year. In March, 1913, the water was drawn off and the masonry of the locks prepared for the installation of the device. Tre device having proved its effectiveness at lock 24, it is anticipated serious accidents will be averted at the locks where it is installed, and where the resulting damage in case of an accident would be very great.

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## PORT COLBORNE.

Messrs. Hogan and Macdonell completed their contract, entered into in 1900, which covered the bulk of the improvements made at Port Colborne. A contract was entered into with M. J. Hogan for the removal of the old east entrance pier and the extension of the east docking, together with the excavation of the entrance in front of the extension. This work is in progress, the depth of water afforded will meet the requirements of the ship canal.

The government elevator showed a large increase in business, handling 11,600,000 bushels of grain, as compared with 7,000,000 bushels the previous year. The above record was surpassed by only one other lake elevator, which had about three times the storage capacity. The need of additional storage capacity was badly felt and considerable business offering had to be turned away. A contract was entered into with the Dominion Bridge Company for the erection of an addition to the elevator, which will, when completed, give a storage capacity of 2,000,000 bushels.

The receipts for handling grain paid all operating and repair expenses for the year and left a net surplus of over \$28,000.

## REPAIRS, NEW CANAL.

Ordinary repairs to the structures on the New canal were carried out during the year. Lock No. 5 was unwatered in March, 1913, and the foundation of the lower recess, which had been undermined, repaired in concrete. The foot bridges over locks Nos. 3, 4 and 5 weirs, which were badly decayed and unsafe, were replaced by reinforced concrete bridges.

## REPAIRS, OLD CANAL.

The Old canal was unwatered for two weeks at the end of May, and repairs were made to the under water structures. The foundations of both recess of lock 24, and the upper recess of lock 23, as well as the foundation of lock 24 weir, which were badly undermined, were repaired in concrete.

A reinforced concrete highway bridge was built over the hydraulic races at lock 4 to replace the wooden structure, which was badly decayed and dangerous to those using it.

A reinforced concrete spillway was built near lock 4, from hydraulic race No. 2 to No. 4. The old spillway had been out of commission for some years and the necessity of such a safety valve was badly felt. The spillway between races one and two was rebuilt.

A new shop with concrete walls was built at lock 21 gate yard, to replace the old one, which was in tumble down condition.

While the water was drawn, the city of St. Catharines laid a new two foot water main across the canal and hydraulic races in the vicinity of lock 4. Various repairs were made by the mill owners to their works.

Sufficient repairs were made to under water works to avoid the necessity of drawing water during the coming year, a feature which is appreciated by the mill owners.

## WELLAND CANAL FEEDER.

Early in April, an unprecedented flood occurred on the Grand river (the water rising some eight inches higher than any previous record) and causing heavy damage to canal works at Dunnville and Port Maitland. The cost of repairing the damage amounted to about thirteen thousand dollars (\$13,000).

A repetition of last year's flood occurred early in March of the present year. The canal works, which had been strengthened by the repairs made in 1912, did not suffer so severely as on the former occasion, but the town of Dunnville was flooded and considerable loss was sustained by the citizens. The need of increased facilities for the

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discharge of the water, from the upper to the lower river, in such emergencies, is apparent, and it is proposed to construct a spillway during the present year for this purpose.

The float bridge at the Inman road crossing of the feeder was replaced by a single track swing bridge. A new concrete substructure was built, and the bridge, which had been in use at Dunnville until replaced the previous year, was rebuilt and transferred to Inman road.

## GENERAL.

The water in Lake Ontario was somewhat higher than the previous year, and Lake Erie fairly up to normal throughout the navigation season.

The following superannuated employees died during the year: William Aikens on July 16, 1912, and John Gearin on August 24, 1912.

Attached is a statement of moneys collected for damages to canal property by different vessels; also a statement showing the highest and lowest recorded depths of water on the mitre sills of the locks Port Dalhousie and Port Colborne for each month of the year.

I have the honour to be, sir,

Your obedient servant,

W. H. SULLIVAN,

*Superintending Engineer.*

To W. A. BOWDEN, Esq.,

Chief Engineer, Department of Railways and Canals,  
Ottawa, Ont.

## WELLAND CANAL.

STATEMENT of damages to Welland Canal property during the fiscal year ending March 31, 1913, and amount paid on account of said damages.

Date of Damage.	Name of Vessel.	Amount of Damage.	Amount Paid.	Date Paid.	Where Paid.
1912.		\$ cts.	\$ cts.	1912.	
May 5	Steamer Bickerdike	16 55	16 55	Oct. 11	Pt. Dalhousie.
" 5	" Arabian	9 72	9 72	" 30	"
" 7	" J. H. Plummer	25 00	25 00	" 30	"
" 11	" Keystorm	24 96	24 96	Feb. 12	"
" 17	Brg. No. 6 S.O. Co.	11 24	11 24	Oct. 1	"
" 19	Str. Beaverton	28 16	28 16	" 17	"
" 20	" G. Howe	17 75	17 75	" 8	"
" 25	" Keywest	19 53	19 53	" 11	"
June 20	" La Canadienne	5,479 53	5,479 53	Jan. 14	Department.
" 27	" A. G. McKinstry	14 25	14 25	Nov. 16	Pt. Dalhousie.
July 5	Tug. Minitague	18 75	18 75	Jan. 15	"
" 13	Str. City of Hamilton	13 70	13 70	Nov. 16	"
Aug. 1	Tug Meteor	16 25	16 25	Dec. 16	"
" 2	Str. Wiley M. Egan	4,881 74	3,659 40	Mar. 27	"
" 16	" H. E. Packer	950 69	950 69	Aug. 20	"
Sept. 5	" Keystorm	17 05	17 05	Jan. 15	"
" 15	" Ogdensburg	22 98	22 98	Mar. 24	"
Oct. 18	Brg. Augustus	27 00	27 00	Dec. 16	"
" 25	" No. 6 S. O. Co.	27 75	27 75	Dec. 3	"
" 23	Str. Arlington	30 57	30 57	Apr. 2	"
Nov. 1	" Samuel Marshall	3,970 99	3,970 99	Nov. 5	"

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## WELLAND CANAL.

STATEMENT showing the highest and lowest depths of water on the lower mitre sill,  
Lock No. 1, New Welland Canal, Port Dalhousie, for the fiscal year ending  
March 31, 1913.

Months.	Lower Sill.				Months.	Lower Sill.			
	Highest.		Lowest.			Highest.		Lowest.	
	Ft.	In.	Ft.	In.		Ft.	In.	Ft.	In.
1912.					1912.				
April	16	4	15	2	November	16	0	15	9
May	16	11	16	3	December	16	0	15	9
June	17	2	17	0	1913.				
July	17	2	16	9	January	16	9	15	10
August	16	9	16	5	February	16	4	16	7
September	16	5	16	3	March	17	0	16	3
October	16	4	15	10					

STATEMENT showing the highest and lowest depths of water on the upper mitre sill,  
Lock 27, New Welland Canal, Port Colborne, for the fiscal year ending March  
31, 1913.

Months.	Upper Sill.				Months.	Upper Sill.			
	Highest.		Lowest.			Highest.		Lowest.	
1912.	Ft.	In.	Ft.	In.	1912.	Ft.	In.	Ft.	In.
April .....	15	0	13	0	November .....	16	2	14	1
May.....	16	7	14	0	December. ....	16	6	13	8
June.....	15	2	13	7	1913.				
July.....	15	1	14	1	January.....	15	9	12	8
August.....	15	5	14	3	February.....	15	7	13	3
September.....	15	8	14	5	March.....	16	5	13	8
October.....	15	4	14	1					

## SAULT STE. MARIE CANAL.

SUPERINTENDING ENGINEER'S OFFICE,  
SAULT STE. MARIE, ONT., March 31, 1913.

SIR,—I have the honour to report upon the maintenance and operation of the Sault Ste. Marie Canal, for the fiscal year ending March 31, 1913.

The canal was opened for traffic on April 24, 1912, and closed on December 19, having been in operation for two hundred and forty days.

The traffic passing this point, through the Canadian and United States Canals, shows a large increase over last year or any previous year. The freight tonnage amounted to 72,472,676 tons, an increase over last year of 36 per cent, the passengers numbered 66,877, a decrease of 16 per cent, and the registered tonnage of vessels amounted to 56,736,807, an increase of 36 per cent.

The Canadian registered tonnage through both canals amounted to 3,693,604 tons, an increase of 81,135 tons or 2 per cent.

The freight through the Canadian canal amounted to 39,664,874 tons, an increase of 28 per cent, the passengers numbered 37,753, a decrease of 2 per cent and the registered tonnage amounted to 25,789,654 tons, an increase of 33 per cent.

## ACCIDENTS.

The only accident of any importance to a vessel, during last season, was the grounding of the steamer *Wm. P. Snyder*, of the Shenango Steamship Company, on a boulder in the lower entrance, on August 22.

The boulder had been shoved over into the channel by the dredge engaged in widening the channel; and the *Snyder* while leaving the lock and attempting to pass an upbound vessel, kept to the south side of the channel, and in doing so grounded on the boulder.

The *Snyder* was released at 3.30 a.m. on August 24th, after having been aground for about fourteen hours.

Traffic was suspended for several hours during the night and nine large vessels were detained for several hours.

On May 26th, the valve rod in the south upper motorhouse was broken by a round log jamming in the valve, and the operating of the lock was suspended for three hours while the log was being removed by the diver.

The lock was operated for several days with one valve while the other valve rod was being repaired.

On August 21st, both opening and closing cables on the north lower main gate, were broken by a surge in the water jerking the gate.

On an examination being made by the diver it was found that the vertical sheave in the well hole behind the gate together with the bearing and bed plate were broken, and the bolts holding the bed plate to the rock were bent.

As there were no spare parts on hand, it was necessary to operate the lock with the auxiliary gates until castings could be made; and on September 3rd the lock was closed down for the day, unwatered and the repairs made.

## REPAIRS.

The top of the lower north pier, from the water line up, was rebuilt last season, for a length of three hundred feet; leaving four hundred feet in length to be rebuilt. This work will be completed during the season of 1913.

The usual cleaning, painting and repair work in connection with the lock buildings and machinery was performed at the close of last season and the present spring.

The old wooden floor in the basement of the power house, which had been in bad condition for some time, was replaced by a concrete floor.

The work of building an extension, three hundred feet in length, to the upper north pier was completed during the season of 1912 and the pier put into use.

The usual statements, showing the traffic passing this point through the Canadian and American canals, are attached.

I have the honour to be,  
Sir,  
Your obedient servant,

J. W. LEB. ROSS,  
*Superintending Engineer.*

W. A. BOWDEN, Esq., C.E.,  
Chief Engineer, Department of Railways and Canals,  
Ottawa, Ontario.

SAULT STE. MARIE CANAL.

COMPARATIVE STATEMENT since opening of lock, September 9, 1895.

	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.
	1895.		1896.		1897.	
Period Open. ....	{ Sept. 9. Dec. 6.		{ May 7. Dec. 10.		{ April 21. Dec. 14.	
Canad. Regist. Tonnage. . .	125,240		586,571	461,331	398,343	-188,228
U. S. Registered Tonnage. .	623,131		3,810,794	3,187,663	3,406,018	-404,776
Total Tonnage. ....	748,371		4,397,365	3,648,994	3,804,361	-593,004
Lockages. ....	698		3,042	2,344	2,976	-66
Vessel Passages. ....	1,193		5,189	3,996	4,376	-813
Time Passing Lock. ....	212 h. 27 m.		984 h. 22 m.	771 h. 55 m.	684 h. 11 m.	-300 h. 11 m.
Average Time Lockage. ....	18' 26 m.		18' 42 m.		13' 79 m.	
	1898.		1899.		1900.	
Period Open. ....	{ April 11. Dec. 9.		{ April 26. Dec. 20.		{ April 23. Dec. 16.	
Canad. Regist. Tonnage. . .	403,331	4,998	561,759	158,528	579,528	17,769
U. S. Registered Tonnage. .	2,354,606	-1,051,412	2,388,441	33,835	1,616,139	-772,302
Total Tonnage. ....	2,757,937	-1,046,424	2,950,200	192,263	2,195,667	-754,533
Lockages. ....	2,520	-456	2,610	90	2,205	-405
Vessel Passages. ....	3,712	-664	3,820	108	3,163	-657
Time Passing Lock. ....	609 h. 30 m.	-74 h. 41 m.	643 h. 16 m.	33 h. 46 m.	541 h. 24 m.	-101 h. 52 m.
Average Time Lockage. ....	14' 51 m.		14' 78 m.		14' 73 m.	
	1901.		1902.		1903.	
Period Open. ....	{ April 20. Dec. 21.		{ April 1 Dec. 20.		{ April 2. Dec. 13.	
Canad. Regist. Tonnage. . .	776,331	196,803	1,366,087	589,756	1,616,385	250,298
U. S. Registered Tonnage. .	1,672,631	56,492	3,233,069	1,565,438	3,145,020	-93,049
Total Tonnage. ....	2,448,962	253,295	4,604,156	2,155,194	4,761,405	157,249
Lockages. ....	2,906	701	3,418	512	3,242	-176
Vessel Passages. ....	4,243	1,080	5,169	926	4,418	-751
Time Passing Lock. ....	724 h. 38 m.	183 h. 14 m.	925 h. 57 m.	201 h. 19 m.	883 h. 10 m.	-42 h. 47 m.
Average Time Lockage. ....	14' 96 m.		16' 25 m.		16' 34 m.	

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SAULT STE. MARIE CANAL.—*Continued.*COMPARATIVE STATEMENT since opening of lock, September 9, 1895.—*Continued.*

	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.	Season.	Increase or Decrease over Previous Season.
	1904.		1905.		1906.	
Period open.....	f April 30. f Dec. 26.		f April 10. f Dec. 20.		f April 14. f Dec. 22.	
Canad. Regist. Tonnage...	1,557,335	—59,050	1,799,336	242,001	1,958,186	159,850
U. S. Regist. Tonnage....	2,673,090	—471,930	3,739,224	1,066,134	4,399,990	660,766
Total Tonnage.....	4,230,425	—530,980	5,538,560	1,308,135	6,359,176	820,616
Lockages .....	3,012	—230	4,031	1,019	4,152	121
Vessel Passages.....	4,092	—323	5,853	1,761	5,913	60
Time Passing Lock.....	811 h. 28 m.	—71 h. 42 m.	1060 h. 10 m.	249 h. 10 m.	1131 h. 23 m.	70 h. 24 m.
Average Time Lockage...	16·16 m.		15·79 m.		16·35 m.	
	1907.		1908.		1909.	
Period Open .....	f April 22. f Dec. 15.		f April 21. f Dec. 15.		f April 21. f Dec. 16.	
Canad. Regist. Tonnage...	2,288,349	329,163	2,556,552	268,203	2,912,586	356,034
U. S. Regist. Tonnage....	9,961,977	5,561,987	7,038,389	—2,923,588	14,899,562	7,861,173
Total Tonnage.....	12,250,326	5,891,150	9,594,941	—2,655,385	17,812,148	8,217,207
Lockages .....	4,596	444	3,667	—929	5,046	1,379
Vessel Passages.....	6,153	240	5,344	—809	6,420	1,076
Time Passing Lock.....	1362 h. 8 m.	230 h. 45 m.	1258 h. 35 m.	—103 h. 23 m.	1853 h. 45 m.	595 h. 10 m.
Average Time Lockage...	17·78 m.		20·59 m.		17·31 m.	
	1910.		1911.		1912.	
Period Open.....	f April 12. f Dec. 15.		f April 22. f Dec. 13.		f April 24. f Dec. 19.	
Canad. Regist. Tonnage...	3,122,068	209,482	3,089,863	—32,205	3,273,614	183,751
U. S. Regist. Tonnage....	20,227,083	5,327,521	16,242,103	—3,984,980	22,516,040	6,273,937
Total Tonnage.....	23,349,151	5,537,003	19,331,966	—4,017,185	25,789,654	6,457,688
Lockages .....	6,110	1,064	5,229	—881	6,290	971
Vessel Passages.....	8,285	1,865	6,802	—1,483	7,866	1,064
Time Passing Lock. . .	2327 h. 40 m.	473 h. 55 m.	1704 h. 35 m.	—623 h. 15 m.	1811 h. 45 m.	107 h. 20 m.
Average Time Lockage...	22·86 m.		19·55 m.		17·53 m.	

## REPORT of Traffic passing Sault Ste. Marie through Canadian and American Canals.

Year.	Number of Vessels passed.	Registered Tonnage of Vessels.	Total Freight Tonnage.	Cost of carrying per mile ton.	Estimated Value of Freight Carried.	Percentage of Freight Carried in Vessels.	Number of Passengers.
				Mills.	\$	p. c.	
1855. ....	193	106,296	14,503	.....	.....	.....	8,295
1860. ....	916	403,657	153,721	.....	.....	.....	9,230
1865. ....	997	409,062	181,638	.....	.....	.....	19,777
1870. ....	1,828	690,826	539,883	.....	.....	.....	17,153
1875. ....	2,023	1,259,534	533,465	.....	.....	.....	19,685
1880. ....	3,503	1,734,890	1,321,906	.....	.....	.....	25,766
1885. ....	5,380	3,035,987	3,256,628	.....	.....	.....	36,147
1890. ....	10,557	8,454,435	9,041,213	1 3	102,214,948	3 5	24,856
1891. ....	10,191	8,400,685	8,886,759	1 35	128,178,208	4 0	26,190
1892. ....	12,580	10,647,203	11,214,333	1 31	135,117,267	3 8	25,896
1893. ....	12,008	8,949,754	10,796,572	1 1	145,436,957	4 1	18,869
1894. ....	14,491	13,110,366	13,195,860	0 99	143,114,502	3 5	27,236
1895. ....	17,956	16,806,781	15,062,580	1 14	159,575,129	3 75	31,656
1896. ....	18,615	17,249,418	16,239,061	0 99	195,146,842	3 0	37,066
1897. ....	17,171	17,619,923	18,982,755	0 83	218,235,927	3 0	40,213
1898. ....	17,761	18,622,764	21,234,634	0 79	233,069,740	2 2	43,426
1899. ....	20,255	21,958,347	25,255,810	1 05	281,364,750	3 1	49,082
1900. ....	19,452	22,315,834	25,643,073	1 18	267,011,959	3 0	58,555
1901. ....	20,041	24,626,976	28,403,065	0 99	289,906,865	4 0	59,663
1902. ....	26,659	31,955,582	35,961,146	0 89	358,306,300	4 0	59,377
1903. ....	18,596	27,736,444	34,674,437	0 92	349,405,014	6 0	55,175
1904. ....	16,120	24,364,138	31,546,106	0 81	334,502,686	6 0	37,695
1905. ....	21,679	36,617,699	44,270,680	0 85	416,965,484	5 0	54,204
1906. ....	22,155	41,098,324	51,751,080	0 84	537,463,454	5 0	63,033
1907. ....	20,437	44,087,374	58,217,214	0 80	569,830,188	5 0	62,758
1908. ....	15,181	31,091,730	41,390,557	0 69	470,141,318	7 0	53,287
1909. ....	19,204	46,751,717	57,895,149	0 78	626,104,173	6 0	59,948
1910. ....	20,899	49,856,123	62,363,218	0 74	654,110,844	6 0	66,933
1911. ....	18,673	41,653,488	53,477,216	0 67	595,019,844	6 0	79,951
1912. ....	22,778	56,736,807	72,472,676	0 67	791,167,591	6 0	66,877

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## SAULT STE. MARIE CANAL.

ENGINEER'S OFFICE,  
SAULT STE. MARIE, ONT.,  
April 1, 1913.

DEAR SIR,—I have the honour to submit my annual report on the improvements to the entrance of the Sault Ste. Marie canal for the fiscal year ending March 31, 1913.

## EXTENSION OF THE NORTH PIER AT THE UPPER ENTRANCE.

A contract was entered into with Mr. John F. Boyd on July 20, 1911, for the construction of a pier 300 feet in length, forming an extension westerly to the north entrance pier. Work was started on this contract September 5, 1911, and after many delays caused chiefly in securing material and labour, the works were brought to a completion November 6, 1912. The additional length of pier constructed will provide better accommodation for vessels awaiting lockage.

## WIDENING OF THE CHANNELWAY AT THE LOWER ENTRANCE.

A contract was entered into with the Soo Dredging Construction Company on July 28, 1912, and was brought to a satisfactory completion on November 30, 1912.

The work embraced in the contract consisted in widening the channel on the south side to a line 230 feet distant and parallel with the centre ranges; and on the north side to a line laid down 295 feet distant with the centre ranges at the easterly extremity and 162 feet distant at the westerly extremity of the work.

The additional width of channel provided at the lower entrance to the lock at the turning point from the channel ranges to the centre line of lock will make the passage of vessels much safer and allow of quicker dispatch.

I have the honour to be  
Your obedient servant,

F. B. FRIPP,  
*Engineer in Charge.*

W. A. BOWDEN, Esq.,  
Chief Engineer,  
Department of Railways and Canals,  
Ottawa, Ont.

## RIDEAU CANAL.

SUPERINTENDING ENGINEER'S OFFICE,

OTTAWA, April 1, 1913.

SIR,—I have the honour to submit herewith my report on the Rideau Canal for the fiscal year ending March 31, 1913.

Navigation opened at Ottawa on May 1, 1912. Navigation opened at Kingston Mills, on May 1, 1912. Navigation closed at Ottawa on December 3, 1912. Navigation closed at Kingston Mills on November 27, 1912.

Navigation was maintained without interruption throughout the entire length of the canal during the whole season, the exceptionally wet summer keeping all the levels up to far above their usual height towards the end of the season.

As a result of this abnormal rainfall during 1912, it may be interesting to state that Rideau lake—the principal source of water supply from Smith's Falls to Ottawa—was within a very few inches of being as high when navigation closed at the end of November last as it was during the spring freshet in April, 1912.

This unusual rainfall continued also during the past winter, and to such an extent as to entirely prevent some of our contemplated winter repairs being carried out; and seriously hindering all our work, in fact, we had three distinct freshets during December and January.

The present spring freshet commenced on Thursday, March 20, and was of an average violence, although after the 24th cold weather again occurred, which checked the flow of the water to a very large extent. This cold weather has continued, and the freshet is not yet over, nor has the ice gone out of the canal levels; but the water having fallen to a great extent, the danger of damage being done by the ice when it breaks up and goes out is considerably lessened, and I do not anticipate much trouble from this cause now.

The number of lockages last year was slightly lower than that of the year before: the reason for which is somewhat difficult to assign; but the wet summer certainly prevented numbers of persons making use of the canal for motor boat outings, and this may perhaps be taken as one of the principal reasons for the reduced number of lockages.

The principal works and repairs carried out along the line of the canal during the past fiscal year are as follows:—

## OTTAWA LOCK STATION (8 Locks and 1 Basin).

.One new pair of lock gates was framed and hung in place.

A considerable portion of the roadway round the basin, from the Public Works Department coal sheds to the foot of Slater street, was filled in with heavy flags and graded and macadamized.

The old stone arch across the Cut at the head of the locks, known as Sappers Bridge, and which was built over eighty years ago by the Royal Engineers, was demolished to make way for the new Plaza; and the great difficulty experienced in throwing down this old stone arch, bore eloquent testimony to the excellent workmanship bestowed upon it when it was built. This arch was thrown down into the canal during the season of navigation, a crib having been placed in the water to receive the debris; but the contractors worked day and night to remove same, so that navigation was only delayed for two or three days, and no great inconvenience was occasioned to boatmen.

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The coping of the upper sill of lock No. 3 was heaved up by the water during the summer, but it was secured for the rest of the season by means of rock bolts and grouting; and a new coping was cut for it during the summer in our quarry; and is now being laid.

## OTTAWA EAST SWING BRIDGE.

The swing bridge and the iron hand railing on each side of the approaches, were sand blasted and painted with bitumastic paint. The flooring was renewed and the roadway on each approach was graded and macadamized.

## CONCESSION STREET BRIDGE.

The steel swing span was sand blasted and painted with bitumastic paint. Small repairs were made to the protection piers of the bridge. Portions of the east side of the Cut between this bridge and Bank street, which had slid into the canal, were built up with dry stone walling; and this work will be continued this spring.

## HARTWELLS LOCK STATION (2 Locks).

The lower wing wall on the west side of the lower lock was taken down and rebuilt, and a new coping was laid on both sides of the chamber of the lower lock. Some grading and sodding was done on the lock lawns; and the dry stone protection wall was continued on the east side of the cut, both above and below the locks. A new roof was laid on the kitchen of the lock house. Small repairs were made to the crib-work below the waste weir and to the tow path roads and to the station in general.

## HOGSBACK LOCK STATION (2 Locks and 1 Bridge).

Considerable repairs were made to the west abutment of the west bulkhead which was taken down and rebuilt with timber from the bottom, on the down stream side. This new crib was then filled to the top with stone. The swing bridge and the bulkheads were replanked and small repairs made to the handrailing. A large quantity of clay was placed in front of the dam by our dredge *Rideau*, and much leakage thereby stopped. A small crib has just been built above the waste weirs to serve for anchorage for the boom, and also to act as an ice breaker in conjunction with the other cribs. This new crib is, however, only partially filled with stone, as this work was stopped by the early and sudden freshet last month. The boom itself suffered considerably last winter owing to the continual rising and falling of the water, which broke the ice and forced it out of its proper position. However, in future, the boom will be drawn out of the water at the close of navigation and placed in position before the freshet. A new storehouse was built here last summer. Sundry small repairs were made to the tow path road and to the station generally.

## BLACK RAPIDS LOCK STATION (1 Lock).

The upper wing wall on the east side of the lock was taken down and rebuilt, and the pavement above the stop-log sill above the lock was taken up and concreted. Small repairs were made to the piers below the lock, and some stone filling placed in the dam. Under ordinary circumstances the masonry repairs stated above could have been executed without unwatering, as the waste weirs usually carry off the water and leave the upper lock sill dry during the winter; but this year the continued winter rains kept the water up to such an extent that a coffer dam had to be built across the mouth of the lock in order to unwater it. Sundry other small repairs were made to the station in general.

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## LONG ISLAND LOCK STATION (3 Locks and 1 Bridge).

The waste wier bulkhead at Manotick was sheeted, and sundry small repairs were made to the station generally. Next winter it is proposed to rebuild the upper lock, the walls of which have been heaved out of line by the frost.

## MANOTICK BRIDGE.

The three steel spans of the bridge were sand blasted and painted with bitumastic paint, and small repairs were made to the bridge in general.

## WELLINGTON BRIDGE.

Small repairs were made to the flooring of the bridge.

## BECKETT'S LANDING BRIDGE.

The timber piers under the bridge were taken down as far as the high stage of the water would permit, and rebuilt.

## BURRITT'S RAPIDS LOCK STATION (1 Lock and 1 Bridge).

No repairs were made here last year, although quite a quantity of timber was delivered for the repairing of the waste weir, and the construction of a crib below the dam, but the water being so high all winter, the work had to be postponed till a later date.

## NICHOLSON'S LOCK STATION (2 Locks and 1 Bridge).

The lower gates of the upper lock were renewed. The upper wing wall, piers and sill of the lower lock were taken down and rebuilt. About 100 feet of the dry wall on the south side of the lower cut, just above the lower lock, was taken down and rebuilt in cement; and 200 feet more of this same wall was rebuilt dry. The lower sill of the lower lock was concreted and planked. A coffer dam had to be built below the lock and the lock pumped for this work on account of the high water. The chamber walls of the lower lock were grouted and sundry small repairs made to the station in general.

## CLOWES LOCK STATION (1 Lock).

One pair of lock gates were renewed. The chamber walls were grouted and pointed, this work being completed from last year. The large stone dam which is arched upstream, has been shifted by the ice and the arc of the key work broken from this cause; so preparations were made last summer to take down about 150 feet of the dam, and rebuild it to its proper radius. The stone was all cut for this work last summer in our quarry, and delivered on the dam; and the cement was also delivered and derricks, &c., erected. However, the river kept so abnormally high last winter that it was considered dangerous to cut the dam, as the water might get beyond control, the dam being 16 feet high.

This work therefore was abandoned until next winter when more favourable weather may be met with, so the cement was used elsewhere on the other work.

This dam is not in any immediate danger, and has stood the present freshet as well as ever; but should be rebuilt as soon as possible after the close of navigation this year. Sundry small repairs were made to the station in general.

## MERRICKVILLE LOCK STATION (3 Locks, 2 Basins, 2 Bridges).

One new pair of lock gates hung last April, having been framed the previous winter, as stated in my last report. The upper mitre sill of the middle lock, as well

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as the upper wing walls, recesses, and gate piers; and also the lower recesses and piers, all on the north side of the lock, were taken down and rebuilt. The coping on the north side of the chamber of this lock was also taken up and relaid; and the chamber walls were grouted and pointed. The lower sill of this lock was concreted and planked, and portion of the mitre was repaired and rebolted to the rock.

A new concrete wall was built inside the old stone wall forming the north side of the lower basin; and the old coping was moved forward on to the top of this new concrete wall. This will effectually staunch the great leakage that has constantly been flowing through the old wall, and which made it extremely difficult to keep the water up in the basin.

The upper wing walls, recesses, and gate piers on the north side of the lower lock were also taken down and rebuilt.

A large quantity of earth, &c., which had accumulated in the upper basin, was excavated and placed behind the wall on the north side of the lower basin to strengthen and widen the same.

The swing bridge and the fixed bridge together with the railing leading thereto, were sand blasted and painted with bitumastic paint. Sundry other small repairs were made to the station in general.

KILMARNOCK LOCK STATION (1 Lock, and 2 Bridges).

Small repairs were made to the back dam as usual. This structure which is literally nothing but a heap of stones, will have to be rebuilt at no distant date, as it requires constant repairs to make it hold the water up every year. Portion of dry stone wall on the south side of the upper cut was rebuilt, and sundry small repairs were made to the station in general.

EDMONDS LOCK STATION (1 Lock).

The lock masonry was grouted and pointed, and sundry small repairs made to the station in general.

OLD SLYS LOCK STATION (2 Locks, and 1 Bridge).

The swing bridge was replanked, and the storehouse and portions of the out-buildings of the lock house were reshingled. The hollow between the north side of the locks and the lock house is gradually being levelled up with clay, and this work will be continued until completed. Sundry small repairs were made to the station in general.

SMITH'S FALLS COMBINED LOCK STATION (3 Locks, 1 Basin, 2 Bridges).

The steel bridge below the waste weirs and dam in the basin was sand blasted and painted with bitumastic paint. The masonry of the middle and lower locks was pointed; as were also the walls of the lock house. The work of filling in portion of the south side of the basin was again continued, and will be proceeded with again next summer. Sundry small repairs were made to the station in general.

SMITH'S FALLS DETACHED LOCK STATION (1 Lock and 2 Bridges).

A new wharf was built above the lock on the north side, for boats to tie up to whilst waiting for the lock, and the island was cleared and brushed and a road made leading to this wharf.

The swing bridge below the lock and the fixed bridge across the mill pond were sand blasted and painted with bitumastic paint.

A contract was entered into with Mr. James Bogue, of Peterborough, Ont., for the construction of a concrete wall along the south side of the cut below the lock.

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This wall was to have been about 900 feet long, and was to have been completed by March 31, last; but this I regret to state Mr. Bogue has failed to do. The workmanship and material are good; but Mr. Bogue did not commence the work immediately after the close of navigation, in spite of my repeatedly calling upon him to do so; and after he did start, he carried on the work so slowly, that the freshet came upon him before the work was finished; and I doubt if the water in the basin will go down low enough before navigation closes this year, to enable him to put in the foundations for the uncompleted portions of the wall. Mr. Bogue has assured me that he can complete the work by the 31st May if the department will extend the time till that date; and I have recommended this being done, although I doubt if he will be able to finish the work which he appears so confident of being able to do; because the basin is now full owing to the freshet, and will be kept for navigation after May 1.

POONAMALIE LOCK STATION (1 Lock).

A curious washout occurred under the upper mitre sill of the lock, caused by the rush of the water from the sluices, involving the necessity of pumping the lock, and concreting the bottom.

The roadway along the north bank of the upper cut was raised and graded, and 320 feet of cement walling was built there. This wall requires to be extended for some distance yet, and will be so extended from time to time. Small repairs were made to the masonry of the lock and also to the lock house. Some obstructions were removed from the cut by our diver. Some new stoplogs were framed for the lock and sundry small repairs were made to the station in general.

BEVERIDGES LOCK STATION (2 Locks, and 1 Bridge).

The long piers running out into the lake at the foot of the lower lock were completed and filled with stone. Small repairs were made to the lock house; and a small frame shelter was built for the lock labourers at the head of the upper lock. A considerable quantity of clay was deposited in front of the retaining dam, being brought on scows from our dredge *Rideau* which was working in the vicinity. Sundry small repairs were made to the lock gates and sluices, and to the station in general.

PERTH BRANCH (1 Basin, and 4 Bridges).

About 350 feet of the wharf on the north side of the basin was taken down to the water level and rebuilt; and five of the bridge rest piers were also rebuilt from water line up.

Portions of the walls along the cuts were rebuilt and some pipe culverts put in. Both storehouses were painted, and sundry small repairs made generally.

OLIVER'S FERRY BRIDGE.

All the fixed spans of this bridge were cleaned by sand blast and painted with bitumastic paint.

THE NARROWS LOCK STATION (1 Lock, and 1 Bridge).

A new frame storehouse on cement foundation was built here. The piers above the lock, which had been damaged by ice last spring, were repaired. One hundred cubic yards of gravel were placed on the dam, and sundry small repairs were made to the station in general.

WOLF LAKE DAM.

The bridge across the outlet of the dam was rebuilt; and a contract was awarded to Mr. E. G. Adams, of Westport, for cleaning out the creek below the dam, in order to allow more water being run off the lake to feed the canal level below Westport.

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NEWBORO LOCK STATION (1 Lock, and 1 Bridge).

New swing bars were framed and put on the upper gates of the lock. The high level bridge across the cut was sand blasted and painted with bitumastic paint. Repairs were made to the approaches to the bridge, and to the piers of the dam; and also small repairs were made to the lock house and to the station in general.

CHAFFEY'S LOCK STATION (1 Lock, and 1 Bridge).

The bridge over the waste weir was rebuilt, and sundry small repairs were made to the station in general.

The Canadian Northern Railway Company are building their line of railway across the upper end of the cut, and a station is to be built quite near the lock, all of which will be a great convenience to campers and tourists, as they will be thus enabled to reach this beautiful spot in two or three hours.

DAVIS'S LOCK STATION (1 Lock).

Small repairs were made to the lock house and outbuildings and to the station in general.

JONES' FALLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

Repairs were made to the masonry of the upper lock; and a new chimney was built on the blacksmith shop. Our diver cleaned up a considerable quantity of debris from the bottom of the lower lock, which had become shallow from this cause.

A new masonry approach was built to the east side of the swing bridge across the lock. The long bridge at the foot of the combined locks was rebuilt from the water line up. The retaining dam at Morton was partially rebuilt and repairs made to the wharf at that point. Sundry small repairs were made to the roads and to the station in general.

BRASSES POINT BRIDGE.

The fixed spans of the bridge were sand blasted and painted with bitumastic paint. The swing span was rebuilt and repairs made to the rest piers.

UPPER BREWERS LOCK STATION (2 Locks, 1 Bridge, 1 Basin).

The centre pier, recess, and manhole on the south side of the locks were grouted and concreted. Two small wooden bridges over the road leading to the bridge were taken away, being replaced with 18-inch tile pipe culverts, and the roadway filled in on top. Sundry small repairs were made to the station in general.

LOWER BREWERS LOCK STATION (1 Lock, and 1 Bridge).

No repairs were required at this station during the past year.

KINGSTON MILLS LOCK STATION (4 Locks, 1 Basin, 2 Bridges).

Our diver cleaned out the bottom of the locks here, and made small repairs to the sluices. Four hundred cubic yards of stone were placed on the embankments by contract with Mr. W. J. Keenan. Sundry small repairs were made to the station in general.

GENERAL.

The usual spring repairs, consisting of pointing and grouting the lock masonry, painting of lock gates, &c., &c., were executed by the lock labourers during the month of April last.

The heavy dimension stone required for the masonry repairs, as detailed above, was taken out of our leased quarry near Westport by our own men, and cut in the

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quarry by our own stone-cutters. The stone was freighted to its various destinations by our own tug and scows, as well as by various private boats.

The bridges mentioned above as having been sand blasted and painted with bitumastic paint, were so treated under contract from the department to Concrete Constructions, Limited.

The various materials required during the year, such as cement, timber of all kinds, paint, oil, hardware, stone, &c., were procured for our use by the Purchasing Agent of this Department.

A small boarding scow, fitted with bunks for 20 men, was built last summer, and equipped with a derrick and tool room, &c., &c., for our carpenters to live on when making repairs along the canal. This scow was rendered necessary on account of the difficulty that exists in our men obtaining board when working along the canal. She is provided with kitchen and mess room, so that the men can live comfortably on her wherever they may be working. A small gasoline launch should be purchased to tow her from place to place; and this launch could be run by the men themselves, and would prove useful in making trips for timber, &c., whenever necessary, instead of our having to send for a boat whenever this service is required.

#### DREDGING PLANT.

The dredge *Rideau* wintered last year in Hartwells Locks, and was employed for a few weeks at the commencement of the season in loading scows with clay for depositing in front of the dam at Hog's Back. She then proceeded to the Tay branch of this canal, where she was employed for the rest of the season in cleaning out and widening the canal cuts in that place. She was laid up this winter in the basin at Perth, and her crane and boom were repaired, as well as portions of her hull. As soon as navigation opens she will resume her work in the Tay branch where she left off last year.

The tug *Loretta* was employed as usual last season in buoying out the channel, towing dredge and scows, delivering timber, stone, cement, paint, oil, &c., along the canal to the various lock stations and bridges; and also she was employed on her usual inspection work. She has been supplied with an electric storage battery, which will furnish light without the inconvenience of the dynamo running when the boat is tied up, and which will also allow the engineer to go off duty at a reasonable hour every night.

Our scows were repaired last winter, in the basin at Ottawa, and are all in good condition.

A new dredging plant was contracted for last year as follows:—The dredge and tug awarded to the W. H. Kelley Lumber Company of Buckingham, Que., and two side dumping scows to Messrs. Burns & Waters of Ottawa.

The scows have been built and delivered and are most satisfactory. The tug is practically finished, and is lying in the basin at Ottawa. She is a well-built boat, but she cannot be tested until after the water is let into the canal after May 1 next. The dredge, which is being built on the banks of the Ottawa river at Buckingham, Que., is, I regret to say, not nearly as far advanced as she should be.

The Contractor informs me that the shops that are building the engines and boiler, have disappointed him with regard to delivery, and has asked to have the time extended for delivery till May 31 next.

This involves a revote of the money already provided, but I do not see any other way out of the difficulty, and I have recommended this being done by the department.

When this new dredging plant is ready, it is intended to use it exclusively in depositing clay on the backs of all the dams, which work will keep her busy for several years.

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This is really most urgently needed, as the leakage through the dams causes a large waste of water, and is partly the cause of the low water towards the end of the season, on account of the leakage making it necessary to draw on our reservoirs to keep up the levels, long before we really should have to do so.

The following is a statement of the highest and lowest water on the lower mitre sills of locks Nos. 1 and 47 at Ottawa and Kingston Mills lock stations respectively.

Ottawa, Lock No. 1.				Kingston Mills, Lock No. 47.			
Highest.		Lowest.		Highest.		Lowest.	
	ft. in.		ft. in.		ft. in.		ft. in.
Apr. 26 .....	17 3	Apr. 1 .....	8 1	Apr. 29-30 .....	9 0	Apr. 1 .....	7 4
May 31 .....	21 8	May 5 .....	16 9	May 31 .....	9 4	May 5 .....	8 10
June 1 .....	21 9	June 29 .....	15 3	June 14-15 .....	9 10	June 1-2 .....	9 4
July 1 .....	14 6	July 30-31 .....	10 1	July 1 .....	9 6	July 28-31 .....	9 1
Aug. 1 .....	9 10	Aug. 24 .....	8 5	Aug. 1-9 .....	9 1	Aug. 10-20 .....	9 0
Sept. 1 .....	8 8	Sept. 29-30 .....	8 2	Sept. 1-4 .....	9 0	Sept. 25-30 .....	8 8
Oct. 30 .....	11 6	Oct. 9-10 .....	7 11	Oct. 1-4 .....	8 9	Oct. 13-23 .....	8 4
Nov. 16 .....	14 3	Nov. 30 .....	11 4	Nov. 1-14 .....	8 5	Nov. 26-30 .....	8 3
Dec. 10 .....	13 4	Dec. 1 .....	11 2	Dec. 1-8 .....	8 3	Dec. 9-15 .....	8 2
Jan. 21-22 .....	12 1	Jan. 12-15 .....	10 9	Jan. 25-31 .....	8 6	Jan. 1-7 .....	8 2
Feb. 1 .....	11 6	Feb. 27-28 .....	10 2	Feb. 1-9 .....	8 5	Feb. 10-14 .....	8 4
March 26 .....	19 4	March 3 .....	10 0	March 30-31 .....	9 1	March 1-3 .....	8 4

I have the honour to be, Sir, Your obedient Servant,

A. T. PHILLIPS, M.Can. Soc. C.E.,  
*Superintending Engineer.*

W. A. BOWDEN, Esq., C.E.,  
Chief Engineer,  
Department of Railways and Canals,  
Ottawa, Ont.

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## DEPARTMENT OF RAILWAYS AND CANALS.

TRENT CANAL,

SUPERINTENDING ENGINEER'S OFFICE,

PETERBOROUGH, 17 April, 1913.

W. A. BOWDEN, Esq.,

Chief Engineer,

Department of Railways and Canals,

Ottawa, Ont.

DEAR SIR,—I have the honour to submit my annual report for the fiscal year ended March 31, 1913, covering the work of construction chargeable to 'Capital,' Trent canal.

## ONTARIO-RICE LAKE DIVISION.

This division extends from Trenton on Lake Ontario to Rice Lake, a distance of fifty-six and a half miles, a detailed description of which was given in my annual report for 1910.

For construction purposes the division has been divided into seven sections, or contracts; all of which are under contract. The estimated value of these seven contracts as revised to date is about \$5,100,000, on which there was expended for work done and materials delivered up to the 31st March, 1913, the sum of \$3,503,442.18, or about 70 p. c. of the estimated value of the seven contracts at their respective contract rates.

There are on the division 18 locks, 14 dams and 18 bridges. All the locks are built except Nos. 8 and 15, which will be built this year. All the dams are built except Nos. 4, 9, 10 and 13 which are from 24 p. c. to 75 p. c. finished. Twelve bridges are finished and in commission, and five more are under construction.

*Section No. 1.*—This section extends from Trenton to Glen Miller, a distance of about four and a half miles, on which length of the river there are three locks, three dams and two bridges.

A contract for the work was entered into with Messrs. Larkin and Sangster on March 10, 1908. The total value of work done and materials delivered up to March 31, 1913, amounted to \$980,915.75 or about 92 per cent of the value of the contract.

The principal items of work done are 254,704 cubic yards earth, 15,709 cubic yards loose rock, 242,429 cubic yards solid rock, and 71,376 cubic yards concrete.

The three locks with their entrance piers and the short canals leading into them are finished. The lock gate machines and valves of the lock culverts have been placed in position.

The three dams on the section are finished and in commission. Dam No. 1 was finished last October, when the old Gilmour Dam at this point was removed.

There are about twenty-two thousand cubic yards of rock yet to remove above grade in order to complete the submarine channel connecting the lower end of the canal below Lock No. 1, and the mouth of the river. This dredging has been sublet by the contractors to Mr. Robert Weddell who will complete the work this season.

In order to protect the canal channel in front of Meyers Island, below Lock No. 1, it was decided last fall to build 1,350 feet of concrete wall along the river side of the channel, so as to alleviate the velocity of the current in the navigation channel during the spring freshets. Arrangements were accordingly made with the contractors to execute the work this summer.

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The Sydney Electric Power Co.'s plant at Dam No. 2 was successfully operated throughout the past year. A short description of this plant was given in my last annual report.

The swing span in the Glen Miller Highway bridge was opened for traffic in February, 1909. The substructure of the Gilmour siding bridge has been finished up to water level, but cannot be completed until the type of the superstructure is definitely decided upon.

The main line of the Campellford, Lake Ontario and Western Railway (C.P.R.) crosses the river about 4,700 feet below Lock No. 1 by a viaduct 1,500 feet long, and 50 feet high, built under the terms of Lease No. 19,946, dated March 14, 1913. It is designed for a single track, and will provide a clear head room of about 39 feet between the lowest steel and high water. The navigation channel span will be 100 feet wide in the clear. The concrete substructure is about completed, and it is expected the steel superstructure will be erected before next Autumn. The whole of the work is being carried out by the Railway Company at their own cost.

The whole of the work embraced in Messrs. Larkin & Sangster's contract for Section No. 1 will be fully completed this season.

*Section No. 2.*—This section extends from Glen Miller to Frankford, a distance of about four and a half miles, on which stretch of the river there are three locks, three dams, and one bridge.

A contract for the work was entered into with Messrs. Dennon & Rogers on May 30, 1908. The total value of work done and materials delivered up to March 31, 1913, amounted to \$439,914.31, or about 61 p. c. of the value of the contract.

The principal items of the work done are 102,557 cu. yds. earth, 13,770 cu. yds. loose rock, 84,665 cu. yds. solid rock, and 53,753 cu. yds. concrete.

The three locks on the section are built, but some work has yet to be done on the entrance piers of Lock No. 4. There is yet a lot of excavation, &c., to do before the short canals at each lock are finished. The lock gate machines and valves of the lock culverts have been placed in position.

Dam No. 4 is about 75 p. c. finished, and will be completed this summer. Dam No. 5 is finished except the platform across the top of the piers. Dam No. 6 is completed.

There is 20 per cent of the earth, and 47 per cent of the rock excavation on the section to do. The quantity of the latter item remaining to be done is about 73,000 cubic yards, and is principally under water, and will take the contractors two or more years to take it out. There are yet about 10,000 cubic yards of concrete on the section to lay, which item of work should be finished this season.

The Sydney Electric Power Company's plant at dam No. 5 was placed in commission on January 28 last, when one of the four units which comprise this plant was started running. The current is transmitted under low voltage to their large transformer station at dam No. 2, where it is stepped up for transmission to various parts of the country.

After five years work only 61 per cent of this contract is finished. During the past year \$69,040.61 was spent on the work, chiefly in laying concrete in lock and Dam No. 4.

*Section No. 3.*—This section extends from Frankford to a point three miles west of Glen Ross, a distance of seven and a half miles. At Glen Ross there are a lock, a dam, and two bridges.

A contract for the work was entered into with the Canadian General Development Company, Limited, on April 24, 1908. The total value of work done and materials delivered up to March 31, 1913, amounted to \$181,042.32, or about 63 per cent of the value of the contract.

Lock and Dam No. 7, the short canal, and bridges at Glen Ross are finished.

The work on this section is finished except the dredging in the river and at the ends of canal at lock No. 7, on which no work has yet been done, as the contractors

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have no dredging fleet on the section, and are waiting for the completion of the canal between Trenton and Frankford, so that they can bring drill boats and dredges up the river from Lake Ontario.

*Section No. 4.*—This section extends from Adam's Landing, a point three miles west of Glen Ross, to Campbellford, a distance of about fourteen miles. There are between Bradley Bay and Campbellford five locks, three dams, four bridges; and about one mile of concrete retaining wall, for enclosing the river through the town of Campbellford, together with a large quantity of earth and rock excavation.

A contract for the work was entered into with Messrs. Haney, Quinlan and Robertson, on June 22, 1910. The total value of work done and materials delivered up to March 31, 1913, amounted to \$701,420.94 or about 53 per cent of the value of the contract.

The principal items of work done are 166,050 cubic yards earth, 4,660 cubic yards loose rock, 130,700 cubic yards solid rock, and 88,630 cubic yards concrete.

Locks 9, 10, 11 and 12 are built, with the exception of part of their entrance piers, which will be finished early this season. The lock gate machines, and the valves of the filling culverts have been placed in position in these locks.

Dam No. 8 and its long wing wall up Meyer's Island is finished. Dams No. 9 and 10 are respectively about 35 per cent and 24 per cent built, the former will be finished this year.

The supply weirs for power below Dam No. 9, and at the head of lock 12 are built.

The concrete culvert under the canal, a short distance above lock 12 is built and in commission, together with all the sewer pipe along the gravel road, which discharges into it.

The piers for the highway swing bridge across the head of lock 12 are built, and the superstructure is erected and finished.

The diversion and substructure of the bridge for carrying the Northumberland Paper Mills siding over the canal are finished. The diversion was opened for traffic in February, 1912. Trains at present are carried over the canal on a wooden trestle. as the superstructure of the permanent bridge, a bascule, will not be erected ready for traffic until midsummer this year.

The Trout Creek diversion and bridges across it on the gravel road and Balaclava street were finished in December, 1911.

About 50 per cent of the core wall in the canal embankment between locks 8 and 9 is built, and 97 per cent of the core walls in the banks between lock 12 and the Grand Trunk Railway bridge are also finished.

About 35 per cent of the east river wall for enclosing the river between the Grand Trunk Railway bridge and the upper end of the section has been built, together with 40 feet of the culvert under the river for connecting the sewers in the back of the east and west river walls.

On August 10, 1912, the removal of the old dam at Campbellford was begun, and as soon as the water in the river reach above the dam had fallen, excavation for the bascule span of the highway bridge was begun. Since then the substructure has been built together with 100 feet of the west river wall adjacent to the bridge. The superstructure of the bascule span, which replaces two of the fixed spans removed from the west end of the bridge, is now about finished, and was placed in commission on March 21 last.

During this season lock 8 and its entrance piers, and all other concrete work between Bradley Bay and the Grand Trunk Railway bridge, Campbellford, will be finished, and about 75 per cent of the excavation, back filling, and embankments, &c., between the above points.

Whether the river walls through Campbellford will be finished or not this season depends on how soon high water subsides, and what action is taken towards proceeding with the construction of the new bridge for the Grand Trunk Railway.

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It is very unlikely that the contractors will do any excavation on Bradley Bay until they can bring a dredging fleet up the river from lake Ontario. There are on this reach of the river, pertaining to the contract for section No. 4, two seasons' work for one dredge.

*Section No. 5.*—This section extends from Campbellford to Crow Bay, a distance of three miles. On this section are two locks, two dams, and about half a mile of concrete wall for enclosing the river through Campbellford.

A contract for the work was entered into with Messrs. Brown and Aylmer on the 28th September, 1907. The contract was amended the 30th May, 1911, so as to include the construction of the river walls. The total value of work done and materials delivered up to the 31st March, 1913, amounted to \$566,796.45, or about 84% of the value of the contract.

The principal items of work done are 143,460 c. yds. earth, 27,085 c. yds. loose rock, 57,100 c. yds. solid rock, and 57,191 c. yds. concrete.

Locks 13 and 14, dams 11 and 12, and the river walls at the lower end of the section are built. The excavation in the Crow Bay channel above lock 14 is finished and accepted.

About 90% of the excavation required to be done between the east river wall and the edge of the channel has been taken out, together with most of the excavation in the navigation channel opposite the river wall. The area covered by this excavation was coffer-dammed, and most of the material was removed by a steam shovel and cars.

The principal item of work remaining to be done on this section is the excavation (dredging) of the channel between the upper end of the east river wall, and the lower entrance of lock 13, but it is very doubtful if much of it can be done this season, as the water in the river at present may be too low to float a dredging fleet, and it will be impossible for us to raise the level of this reach until dam No. 10 is finished, which structure will not likely be completed until late in the summer of 1914.

*Section No. 6.*—This section extends from the lower end of Crow Bay to one thousand feet west of Heeley Falls bridge, a distance of about three miles. There are three locks, one dam, and one bridge on the section, together with a large quantity of earth and rock excavation. The short canal at this point is located on the west side of the river and is designed to overcome the 76 feet rise between Crow Bay and the fourteen miles of river reach between Heeley Falls and Hastings.

A contract for the work was entered into with Messrs. Haney, Quinlan & Robertson, on the 23rd May, 1910. The total value of work done and materials delivered up to the 31st March, 1912, amounted to \$357,358.04, or about 68% of the value of the contract.

The principal items of work done are 28,000 cubic yards of earth, 23,200 cubic yards loose rock, 102,170 cubic yards solid rock, and 51,872 cubic yards concrete.

Locks 16 and 17, and their entrance piers are finished, and also the retaining wall along the east side of the canal between locks 15 and 16. The extension walls at the head of lock 15 and the piers for the road bridges at this point are also built. The lock gate machines and the valves of the filling culverts in locks Nos. 16 and 17 have been placed in position.

Dam No. 13 is about 70% built, and the wall along the east side of the canal between the dam and lock No. 17 is finished.

Three of the small fixed spans at the east end of Heeley Falls bridge have been taken down and replaced by a swing bridge, which was placed in commission the second week of October, 1912.

The work remaining to be done on this section is the construction of lock No. 15, completion of dam No. 13, and the balance of the excavation, all of which will be done this season, except some excavation (dredging) in the lower entrance of lock No. 15.

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The Eastern Power Co. who are constructing a hydro-electric plant at this point, carried on their work during the past year in an intermittent manner. The foundation of the power house is 75% built, the supply weir or head-block situated at the head of lock No. 17 is built, and two lines of 12 feet diameter steel pipe connecting the head block and power house are 90% finished, and the steel plates of the third line of pipe are delivered on the ground. Some work has been done in the tail race, the excavating of which involves the removal of a large quantity of submarine rock excavation. The plant is designed for the full development of the power at this point, and the company hope to have it ready for operation concurrently with the completion of the canal works.

*Section No. 7.*—This section extends from Heeley Falls to Rice Lake, a distance of about nineteen and a quarter miles. The principal works consist of a large quantity of earth and rock dredging in the river, the construction of a new lock and dam at Hastings, and a new and longer swing span at Trent Bridge, and new guide piers for the Grand Trunk Railway bridge at Hastings.

A contract for the work was entered into with the Randolph Macdonald Co., Ltd., on the 4th January, 1909. The total value of work done and materials delivered up to the 31st March, 1913, amounted to \$275,995.27 or about 64% of the value of the contract.

The principal items of work done are 51,948 c. yds. earth, 18,314 c. yds. loose rock, 44,095 c. yds. solid rock, and 13,780 c. yds. concrete.

The new lock was placed in commission on March 30, 1911. The new dam was finished and placed in commission in October, 1912, when the old structure was removed. The short swing span in Trent Bridge has been taken down and replaced by new piers and a longer span, which was placed in commission on the 5th June, 1911. The new channel under the south arm of the swing span was dug out last summer. It increases the cross section of the river at the bridge, which will tend to improve spring flood conditions between Trent Bridge and Hastings. The new guide pier for the Grand Trunk bridge at Hastings is built, and is a great improvement to navigation.

About 90% of the excavation in the river between Rice Lake and Hastings is finished and eighteen channel piers have been placed in position between these points. Below Hastings considerable dredging has been done.

There are yet about one hundred thousand cubic yards of dredging to do, and we estimate that it will take the contractor's two dredging fleets about two seasons to complete the work.

#### BURLEIGH FALLS DAM.

Messrs. Bishop & Buchannan completed their contract for the construction of the new concrete dam at Burleigh Falls in July, 1912. The old timber dam was removed the following month.

On the 3rd October, 1912, the final estimate for the work amounting to \$54,047.96 was returned to the department.

#### ROSEDALE SECTION.

Messrs. The Randolph Macdonald Co., Ltd., completed their contract for the construction of the Rosedale section on the 26th October, 1912. The new lock has been in commission since May, 1910, and the new dam since November, 1910.

A final estimate for the work, amounting to \$289,184.64, was sent into the department on the 7th March, 1913.

#### HOLLAND RIVER DIVISION.

In December 1911, the Government decided to abandon further work on the Holland River division, and accordingly accepted the surrender of the York Construction

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Co's contract for the construction of section No. 2 on the 31st December, 1911, and the execution by them under a special agreement of certain unavoidable work in connection with the road approaches to bridges, &c. The latter work was completed the 30th June, 1912, at a cost of \$27,929.48.

A final estimate for the work done by the company on section No. 2 up to the 31st December, 1911, amounting to \$537,189.16, was sent into the Department on November 11, 1912.

The Canal office at Newmarket was closed on the 31st July, 1912, and shortly afterwards a caretaker, residing in Holland Landing, was appointed to look after the canal property and right of way.

## BRIDGES.

The Cleveland Bridge and Engineering Co's contract, dated 24th October, 1910, for the manufacture and erection of highway swing bridges at Heeley Falls and Trent bridge, was completed on the 7th November, 1912, at a total cost of \$16,240.84.

The swing span at Trent Bridge was placed in commission on the 5th June, 1911.

On the 30th June 1911, a contract was entered into with the Hamilton Bridge Works Co., Ltd., for the manufacture and erection of a "Strauss" Highway Bascule Bridge over the canal at Bridge St., Campbellford, Ont. The bridge is a single leaf, of the Heel Trunnion Type, consisting of a one hundred and eight feet through truss moveable span, and a thirty-five feet tower span carrying the counterweight.

The erection of the bridge was far enough completed to permit it being placed in commission on the 21st March last. Painting and testing has yet to be done.

The Canadian General Electric Co. are providing the electric equipment for the bridge, under a contract dated 8th October, 1912. The material is delivered, and about 90 p.c. of it is erected.

The Dickson Bridge Works Co's contract, dated 4th August, 1911, for the manufacture and erection of a highway swing span across the head of Lock No. 12, at Campbellford, was finished on the 17th July, 1912, at a total cost of \$3,998.00.

On the 12th November, 1912, a contract was entered into with the Hamilton Bridge Works Co., Ltd., for the manufacture and erection of a 'Strauss' Railway Bascule and fixed span bridge for carrying the Northumberland Paper Mills Railway Siding over the canal at Campbellford. The bascule is a single leaf, single track bridge, consisting of an 83 feet through plate girder moveable span, and a tower carrying the counterweight. The fixed span is a semi-through plate girder 77 feet long. The bridge is now being manufactured and will be erected this summer. The electrical equipment for it is being manufactured by the Canadian General Electric Co.

## VALVES FOR LOCKS.

*Wagon Valves.*—A contract for the manufacture and erection of the wagon valves required for the new locks, and regulating culverts of the Ontario-Rice Lake Division of the canal, was entered into with the Dominion Bridge Co., Ltd., on the 5th October, 1908.

All the valves have been installed in place, except those of Locks Nos. 8 and 15, the material for which is delivered on the ground, and will be placed in position as soon as the locks are built. A description of these valves was given in my annual report for 1910.

*Cylindrical Valves.*—The Wm. Hamilton Co., Ltd., completed their contract for the manufacture and erection of the cylindrical valves for the flight locks at Ranney and Heeley Falls, Ontario-Rice Lake Division, on the 12th November, 1912, at a total cost of \$24,522.00.

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## LOCK GATE OPERATING MACHINES.

A contract was entered into with Mr. Herbert B. Collier on the 7th May, 1909, for the supply and delivery of Operating Machines, Anchorage Fittings, and Pivots required for the Lock Gates of the new locks along the canal. These machines are being manufactured by the Wm. Hamilton Co., Peterboro.

All the material has been manufactured and installed in position, except that for Locks Nos. 8 and 15, Ontario-Rice Lake Division, which will be installed as soon as the locks are built.

## EMERGENCY DAMS.

On the 5th April, 1911, a contract was entered into with the Dominion Bridge Co., Ltd., for the supply, delivery, and erection of seven sets of steel stop-logs and bridges, for emergency dams.

These structures are to be placed at the head of locks situated at the lower end of long river reaches, or lakes, and are intended for use in case through accident; connection is established between the upper and lower levels, by a stream through the lock chamber of such velocity, that the mitring gates could not be closed until the current has been checked.

In general the structure consists of a small deck girder swing bridge of unequal arms, carrying a trolley car, and winches for handling and placing the five steel stop-logs, for closing the head of the lock. These logs when not in use are stored on the short arm of the bridge, and act as a counterweight for balancing it when swinging.

The material for the seven dams has all been manufactured and delivered, and that for the dams at the head of the canal above Lock 6, and at the heads of locks 7, 12 and 14 is all erected. The contract will be fully completed early this summer.

## GENERAL.

*Cement.*—About 71,000 barrels of Portland cement were delivered on the canal during the past year, under contract with the Canada Cement Company.

*Lock Gates.*—Plans and specifications for the lock gates of the locks on the Ontario-Rice Lake Division have been completed, ready for advertising for tenders for their construction during the current year.

*Nassau Dam.*—A plan and specification are being prepared for a new concrete dam at Nassau to replace the present wooden structure which is very leaky. Tenders will probably be invited for the construction of the dam as soon as the plan and specification are ready.

*Fenelon Falls Dam.*—A plan and specification have been prepared for a new concrete dam at Fenelon Falls to replace the present dilapidated wooden structure. The work is now advertised for tenders.

*Severn River.*—In accordance with your instructions of December, 1911, a very complete survey of the Severn river was begun last year with the object of preparing plans and specifications for the work of canalizing the river to the same dimensions as the Ontario-Rice Lake Division of the Trent waterway. The work is under the immediate charge of Mr. E. B. Jost.

The various outlets or mouths of the river have been thoroughly surveyed and sounded, and also the north shore of Matchedash Bay for the purpose of determining the best harbour for the northern terminal of the canal. The country in the vicinity of the Big Chute has also been very carefully examined and surveyed with the object of determining the best location for the locks and canal at this point.

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At present an extended examination and survey of the river between Ragged and Swift Rapids is being made with the object of ascertaining the feasibility of locating a lock and dam at Swift instead of at Ragged Rapids, and also of moving the Orillia hydro-electric plant to Swift in the event of it being finally decided to locate the lock and dam at that point.

For construction purposes it is proposed to subdivide the river into three sections. Section No. 1 to include all work at the mouth of the river and at Big Chute; section No. 2 to include the work at Swift and Ragged Rapids; and section No. 3 to include that between Sparrow and Couchiching Lakes.

The preliminary plans and estimates for section No. 1 have been forwarded to the Department, and those for section No. 2 will be ready by the end of this month. The field notes for section No. 3 have been plotted and some work done on calculating quantities, &c.

*Lake Surveys.*—Very little work was done during the past year on the hydrographic survey begun five years ago, of the chain of lakes which form part of the Trent waterway. It is the intention however to continue the work this summer, as soon as the Severn River survey is finished.

I am, sir,  
Your obedient servant,

ALEX. J. GRANT,  
*Superintending Engineer.*

## DEPARTMENT OF RAILWAYS AND CANALS, TRENT CANAL.

## SUPERINTENDENT'S OFFICE.

PETERBOROUGH, May 27, 1913.

SIR,—I have the honour to submit herewith my annual report of the maintenance and operation of the Trent canal for the fiscal year from April 1, 1912, to March 31, 1913.

The extent of the canal completed is the same as last year, namely, 160 miles.

## OPENING AND CLOSING OF NAVIGATION.

	Opened.	Closed.
Peterborough-Hastings division.....	April 23.	December 1.
Peterborough-Lakefield division.....	May 20.	November 6.
Lakefield-Fenelon Falls division.....	May 3.	December 1.
Balsam lake-Lake Simcoe division...	May 8.	October 26.

## PETERBOROUGH LIFT-LOCK OPENED.

The Peterborough hydraulic lift-lock was operated on May 20.

## WORK PERFORMED ON THE DIFFERENT DIVISIONS DURING THE YEAR.

## RICE LAKE-HEALEY FALLS DIVISION.

The following work was performed during the year on the Rice Lake-Healey Falls division.

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*Lockmaster's House, Hastings.*—Minor repairs were made to the Lockmaster's house at Hastings, such as renovating, &c.

*Wharfs in Rice Lake.*—General repairs were made to a number of wharfs in Rice Lake, new planking being put in where necessary, which improved the condition and general appearance of these wharfs. The cost of this work was \$282.75.

## PETERBOROUGH—RICE LAKE DIVISION.

*Planking Bridge, Hale's Bridge.*—Hale's bridge on the Otonabee river was replanked, and minor repairs made at a cost of \$197.17.

*Landing Pier at Whitfield's Landing.*—A landing pier was constructed at Whitfield's, Rice Lake, that fills a much needed want of the farming community in that section of the county. The township council had been approached at different times, by the residents, with a view of working out some method to enable the farmers to get ready access to Peterborough to market their produce, and as a result, a petition was circulated praying for the erection of a wharf or a pier at this point. The township council have spent considerable money on the road leading to the pier, and considerable produce and freight will, no doubt, be handled at this point. The total cost of the pier was \$544.53.

*Lock No. 7, Peterborough.*—A new timber slide for canoeists was erected at the upper end of No. 7 Lock, known as Collin's Locks, Peterborough. The old slide had become a menace to the canoeists, and it was necessary to take some steps to prevent loss of life and accidents. Additional electric lights were also put in, in the vicinity of the slide. Anchor bolts were put into the entrance pier above the lock, running from the retaining wall twenty-two feet back, and these were reinforced by concrete blocks. The lockmaster's house and office were repainted.

*Swing Bridge at No. 7 Lock, Peterborough.*—Minor repairs were made to the swing portion of the bridge at No. 7 Lock, Peterborough.

## PETERBOROUGH—LAKEFIELD DIVISION.

*Peterborough Hydraulic Lift Lock.*—On Friday, October 23, the lower west gate of the Peterborough lift lock was out of commission, and refused to raise. On examination it was found that the cover and studs on bearing next to the sprocket-wheel that carries the chain for lowering and raising the gates was broken. This was, no doubt, caused either by the dropping of the gate suddenly or by reversing the gate engine too quickly, causing a sudden jerk on the slack chain. The repairs were made and the lock was in perfect working order by the following Sunday evening. Of course, navigation was interfered with to some extent on Friday and Saturday. Other general repairs were made at a cost of \$2,405.69. Considerable repairs were made to the canal banks between the Peterborough lift lock and the Norwood road. About one hundred and fifty feet of riprapping on the east bank of the south side of the Norwood road slid into the canal. This was evidently caused by the frost leaving the ground during the month of April. As soon as possible men were put to work and repaired the damage. On June 1, 1912, a slide in the bank, north about one hundred and fifty yards above the Peterborough lift lock, was reported. This was caused by seepage from the canal, and, no doubt, would have proved serious had not immediate steps been taken. A clay core about three hundred feet in length was put in. This work will be resumed the coming season. Other minor repairs were made to the banks at a cost of \$4,989.12.

*Nassau Dam.*—Extensive repairs were made to Nassau dam. The slide in No. 1 weir was in a very bad state of repair, the lumber being completely gone, and the

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stone filling nearly all out. It was found necessary to put in a new bottom, rock bolt it and fill it up with stone. No. 2 weir was in about the same condition as No. 1, and required similar repairs. The log weir was also repaired, new stoplogs and guides being put in. No. 4 weir was in a very dangerous condition, the pier seemingly having been built on gravel, and a considerable washout was located under the pier. A new floor was put in here, as well as new timbers. The repairs to the dam are of a lasting nature, and were made at a cost of about \$1,279.05.

*Peterborough Flood-Dam above Hunter Street.*—Considerable repairs were made to this dam, but owing to high water it was impossible to complete the work.

*Dredging Locks 3 and 5.*—Considerable sand and earth had been washed into the approaches of the locks between Peterborough and Lakefield by the current. This obstruction was causing trouble to the steamboatmen, and it was found necessary to have the dredge *Fenelon* brought down from Lindsay late in November, to clean out approaches. This work entailed an expenditure of \$1,779.47. This work was not completed, and will be resumed this spring.

*Painting Lockhouses.*—The lockmasters' houses between Peterborough and Lakefield, five in number, were repainted at a cost of \$1,332.41.

*Dam No. 5.*—The two centre piers of the dam went out and had to be reconstructed and new flooring put in the sluiceways at a cost of \$800.59.

*Dam No. 3.*—Minor repairs were made to the 'gains' at dam No. 3.

*Locks at Young's Point.*—Minor repairs were made to the locks at Young's Point.

*Landing Pier, Sandy Point, Clear Lake.*—A small landing pier at Sandy Point, Clear lake, was built, costing \$275.92.

*Mount Julian Dock, Stony Lake.*—A large quantity of filling was put in at this dock and a storehouse 16 x 24 feet built, the total cost of the work being \$996.73.

*Lockmaster's House, Burleigh Falls.*—Extensive repairs were made at Burleigh Falls. The lockmaster's house was jacked up and new timbers put in, new flooring was put in throughout the house, the house was repainted as well as the office and storehouse.

*Bridge at Burleigh Falls.*—New timbers were put in the approaches and the bridge repainted. The road was repaired, the high water causing a washout at this point.

*Plant-General.*—The cost for general repairs to the plant during the season was \$6,561.56.

*Bridge at Buckhorn.*—Minor repairs were made to the bridge at Buckhorn.

*Lockmaster's House, Buckhorn.*—Repairs were made to the lockmaster's house at Buckhorn, and the chimney rebuilt at an expenditure of \$106.65. The storehouse and ice house were repainted.

*Glance Pier at Buckhorn.*—A portion of this pier had been carried away by the water and was renewed. New lumber being put in and the pier reloaded with stone at a cost of \$330.26.

*Peterborough to Bobcaygeon.*—*Lockgates*—General repairs were made to the lockgates between Peterborough and Bobcaygeon at a cost of \$1,079.29.

*Bridge at Bobcaygeon.*—New flooring was put in at Bobcaygeon and the bridge was repainted.

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*Bobcaygeon Lock and Dam.*—Extensive repairs were made to the Bobcaygeon lock and dam. At the dam the old stoplogs were replaced by new ones, 21 in number, new 'gains' were put and the fish slide replaced. A portion of the tumbling dam was also repaired, additional plank being put on the top of the dam. The lockgates, as well as the lockmaster's office was repainted. New timber supports were placed in the raceway, and a new covering of hemlock plank laid down. These repairs were done at a cost of \$1,624.40.

*Scugog River Dredging.*—Dredging was resumed in the Scugog river above the Wellington street bridge on April 17, 1912. Until July 1, the dredge was cleaning mud, wire, bark and other refuse off the bottom of the river for a distance of 3,000 feet, from the Wellington street bridge to Baker's mill, preparatory to drilling operations. On July 1 the dredging proper was commenced above the Wellington street bridge. The channel was dredged for a distance of 1,000 feet below the bridge to a depth of nine feet, and one hundred feet wide, and nine feet deep, and fifty feet wide for a distance of 420 feet. An average of two hundred yards per day from July 1 to October 31 was taken out. All this was rock excavation and required blasting to a depth of four feet of rock.

*Sturgeon Lake Dredging.*—The channel at the entrance of the Scugog river and Sturgeon lake was dredged for a distance of two hundred feet and twenty-five feet wide at a cost of \$1,138.99.

*Pigeon Creek Dredging.*—The channel from Pigeon lake to Omemee was cleared of bogs. These bogs were removed from the old channel and anchored by means of boom timber and cement anchors. About seven thousand feet of boom timber, two hundred and fifty boom chains, and one hundred cement anchors and chains were used for this purpose. The total cost of the work was \$2,254.51.

*Fenelon Falls.*—The landing pier at the Fenelon Falls dock at the upper end of the lock was rebuilt from the water line up. A new plank platform was laid on the pier. The lockgates were overhauled and new chains put in and new valves installed in the upper gates. A new cement walk was also laid to the lockmaster's house.

#### LAKE SIMCOE—BALSAM LAKE DIVISION.

*Toolhouse at Rosedale.*—A new toolhouse was erected at Rosedale, and minor repairs made to the swing bridge at an expenditure of \$359.75.

*Cleaning Drowned Lands.*—In April, 1912, a number of men were put to work, cleaning drowned lands at the 4th Concession bridge in the township of Eldon, in the vicinity of Balsover. A considerable portion of land was also cleared, the timber being cut into wood and posts, and the refuse burned. The cost of carrying out the work was \$783.23. On December 16th, 1912, a gang of men were put to work cleaning the floating timber and stumps off the drowned lands in the vicinity of what is known as the Portage Road bridge, Balsam lake, Lake Simcoe division. The timber was cut into cordwood and posts, while the stumps and other debris were piled and burned. The cost of this work was \$524.31.

*Kirkfield Hydraulic Lift Lock.*—The machinery of the lock was overhauled and minor repairs made to the lock in general at a cost of \$273.38.

*Locks and Lockgates.*—New concrete recesses for gate arms on the lower gates were put in from lock 1 to 5, inclusive, as well as other minor repairs made. A new concrete floor was put in the cellar of the lockmaster's house at lock No. 4. The total cost of the work being \$1,157.35.

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*Cleaning out Ditches.*—The ditches between the Middle Road and Talbot river on the north side of the canal, and on the south side from the Middle Road, East, along the Wescott property, were cleaned out. This work was compulsory owing to the fact that the tile drains carrying the water from the farms in the vicinity were cut off and blocked, when that section of the canal was constructed and the ditches were dug to carry the surface water and prevent damage to property. A portion of this work on the north side is yet to be completed. The outlay of this work, so far, is \$557.25.

## RESERVOIR WATERS.

## GULL RIVER.

*Moore's Falls Dam.*—The dam at Moore's Falls was rebuilt with concrete. A twenty-five feet sluiceway put in, concrete piers erected and a concrete reinforced platform laid on the dam. On the south side of the dam two twenty-five foot openings were put in with concrete piers and cut-off walls with reinforced concrete tops. The channel on the north side was deepened four feet and the sill lowered four feet. A granite formation of rock was taken out for a distance of eighty-five feet, four feet deep and thirty-six feet wide.

*Dam at Norland.*—The slide was repaired and a new platform erected on the dam, costing \$162.42.

*Dam at Elliott's Falls.*—Minor repairs were made to the dam at this point.

*Big Bob Lake Dam.*—A new lumber platform was erected on Big Bob lake dam costing \$378.69.

*Twelve Mile Lake Dam.*—Minor repairs were made to the dam at Twelve Mile lake at a cost of \$135.25.

*Oblong Dam.*—Repairs were made to the slide on Oblong dam on the east branch of the Gull river. The cost to carry out these repairs was \$183.88.

*Hawk Lake Dam.*—General repairs were made to the dam at Hawk lake at a cost of \$400.97.

## BURNT RIVER.

*Devil's Lake Dam.*—Minor repairs, gravelling, &c., were made to Devil's Lake dam.

*White Lake Dam.*—Repairs were made to the slide at White Lake dam.

*Black Lake Dam.*—The road around Black lake in the township of Cavendish was repaired and gravelled. These repairs were necessary owing to a washout caused by the excessive rains and the overflowing of the waters at the dam.

*Bear Lake Dam.*—Minor repairs were made to the dam at Bear lake.

## MASSASSAUGUA WATERS.

*Gull Lake Dam.*—This dam was repaired and gravelled.

*Eagle Lake Dam.*—Minor repairs were made to Eagle Lake dam.

*Bottle Lake Dam.*—One side of the dam was rebuilt and a new timber platform put on and the dam resheeted at a cost of \$1,680.36.

*Scott's Dam.*—The dam at Scott's Mills was rebuilt. A new platform was put on and the dam resheeted and the slide repaired. This dam is now in a good state of repair. The expenditure of same being \$1,367.36.

## EEL'S LAKE.

*Eel's Lake Dam.*—The old dam at Eel's lake which empties into Eel's creek was removed and a substantial new timber dam built. The new dam is 86 feet long, with a centre pier 11 feet x 16 feet, and two shore piers 31 feet each. There are two 7-foot sluiceways. The dam now controls a 11-foot head. The cost of constructing same was \$2,160.46.

## REPORT ON LIGHTHOUSES AND LIGHTS, AND AIDS TO NAVIGATION.

*Lake Simcoe.*—Built a lighthouse at Big Bay point, Lake Simcoe, and put a concrete pier 24 x 18, 6 feet above normal water level. We also built a wooden house for light fourteen feet high from concrete pier. We placed a blaugas plant in this lighthouse. This light gives good satisfaction with the steamboat men.

We built a new wooden lighthouse on the wharf at Kemfelde bay. This light is fourteen feet high from the wharf. Same design and dimensions as the wooden part of our other lighthouse, Big Bay point, as shown on plan. Light, oil.

Put a light on the wharf at Thorah island. Light, oil.

Put a new siche gas plant in the lighthouse, Gamebridge, at the entrance to canal from Lake Simcoe.

Two buoys were put out at entrance to Holland river from Cook's bay.

One buoy on shoal off Belle Ewart.

One buoy on shoal west of Fox island.

Two buoys on shoal northeast of Fox island.

Two buoys on shoal south of Big Bay Point light.

One buoy on shoal at Hooges wharf.

One buoy on shoal off Jackson point.

One buoy at entrance to canal from Simcoe.

The lighthouse at entrance to canal was painted.

Painted the buoys in the canal from Simcoe to Balsam lake.

*Balsam Lake.*—Painted the buoys, and put new ones at Greenly's island, Ball island, and Small island, south of Grand island, and also painted the lighthouse at Rosedale, at entrance to canal from Balsam lake.

*Cameron Lake.*—A new lighthouse was put at the entrance to the canal from Cameron lake. Same design as at Big Bay point, with concrete base.

Painted the lighthouse, buoys, and put in one new buoy.

*Sturgeon Lake and Scugog River to Lindsay.*—Put out two new buoys at the entrance to Fenelon river from Sturgeon lake and painted all the buoys. Put a new buoy at Sturgeon point, McConnal's island, and a new lighthouse at the entrance to Scugog river from Sturgeon lake. We had the old siche gas plant repaired and replaced. Painted all the lighthouses, fourteen in number, on the Scugog river. Painted the buoys and put in twenty new ones.

*Scugog River and Lake Scugog.*—Painted the buoys from Lindsay to Port Perry, Scugog lake, fifty six buoys.

*Sturgeon Lake at Bobcaygeon.*—Painted the lighthouses and buoys.

## REPORT ON LIGHTHOUSES AND LIGHTS, AND AIDS TO NAVIGATION.

*Pigeon Lake.*—Painted the lighthouse at Pigeon lake, and the buoys in Buckhorn, Deer bay, and Lovesick lake.

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*Stony Lake and Clear Lake.*—Painted and repaired the lighthouse, and reset the buoys and painted them.

*Young's Point.*—Had the gas plant overhauled and built a new house for the siche gas machine 10 x 12, with concrete foundation and floor.

*Young's Point to Lakefield.*—We had the buoys repainted and placed in position.

*Lakefield to Peterborough.*—The buoys were painted and placed in position.

*Otonabee River to Rice Lake.*—All the buoys were painted and placed in position.

*Rice Lake.*—Built a new lighthouse at Tick island, wood top, same as at Big Bay point, with concrete foundation. A light was placed on the pier at the forks of the river, and one on the pier at Jubilee point. Painted and repaired the lighthouse at entrance to river at the cut, leading into Rice lake from the Otonabee river.

I am, Sir,

Your obedient servant,

J. H. McCLELLAN,  
*Superintendent.*

W. A. BOWDEN, Esq.,  
Chief Engineer,  
Department of Railways and Canals,  
Ottawa.

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## DEPARTMENT OF RAILWAYS AND CANALS.

ONTARIO—ST. LAWRENCE CANALS,  
SUPERINTENDING ENGINEER'S OFFICE,  
CORNWALL, April 1, 1913.

SIR,—I have the honour to submit my annual report on the St. Peter's canal for the fiscal year ending March 31, 1913.

The canal was opened for navigation April 22, 1912, and closed January 11, 1913.

During the season of navigation 1,242 registered vessels were passed through the canal. In addition to these a considerable number of small craft (principally fishing boats measuring from 7 to 10 tons burthen) were passed through. No record was kept of these owing to the fact that they are not registered.

## REPAIRS.

Some repairs were made to segment plates, chains and rollers, as well as valve rods in lock gates. The hand rails on all lock gates were also repaired.

Minor repairs were made to cribwork facing along west bank of canal.

A new floor was placed on highway swing bridge across canal.

A new watch house for bridgetenders was erected.

A new floor was laid in kitchen of lockmaster's house.

The whole of the canal works are in such a dilapidated condition that only sufficient repairs are attempted to enable the canal to be operated till the new lock is ready for use.

## IMPROVEMENTS.

The works of improvement as designed consist of the construction of a new lock and entrance at the Atlantic end of the canal.

The lock is to be 48 feet wide and 300 feet long between gates opening in the same direction. It provides for a depth of 18 feet of water on mitre sills at low tide.

The lock will have a rock bottom, and the side walls of lock as well as the entrance walls for a length of about 400 feet on each side, will be built of concrete.

The work as designed entails the removal of about 300,000 c. yds. of earth and 60,000 c. yds. of solid rock.

A contract for this work was entered into with Mr. W. H. Weller of St. Catharines, Ont., on Nov. 17, 1911, but, owing to the lateness of the season, no attempt was made to commence operations till the spring of 1912.

The contractor's plant, consisting of one 70-ton steam shovel, two 20-ton locomotives, thirty dump cars of 6 c. yds. capacity, two flat cars, two steam hoists, &c., &c., began to arrive early in April, and on May 4, everything being in position, the work of excavation was commenced.

The material to be excavated proved to be exceedingly hard, and it was found necessary to resort to the use of dynamite to loosen the earth in front of the steam shovel. The material is a hard red clay containing about 40% of gravel and small stones with a large number of small boulders measuring from one to four c. ft. This material when placed in dump and exposed to rain falls becomes very soft, making it extremely difficult to maintain tracks in good condition for the running of trains.

The material excavated is being deposited along the north shore of St. Peter's bay and over the low lands adjacent, and will make valuable lands for the location of railway sidings, should future conditions call for them.

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The difficulty experienced in the excavation of this material and the extremely wet weather of the past season greatly retarded the work, and the amount of material excavated (some 77,000 c. yds.) was very disappointing.

A portion of the old portage road along the west side of canal was excavated and a new road has been constructed a short distance west of the old, and although not yet completed, is available for traffic.

The contractor's operations have not interfered in any way with the navigation of the canal.

At the present time the contractor is having all of his plant thoroughly overhauled and put in the best possible shape for the coming season, and expects to be ready to resume work in a few days.

I have the honour to be, sir,  
Your obedient servant,

C. D. SARGENT,  
*Superintending Engineer.*

W. A. BOWDEN, Esq., C.E.,  
Chief Engineer,  
Department of Railways and Canals,  
Ottawa, Ont.

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## DEPARTMENT OF RAILWAYS AND CANALS.

WELLAND SHIP CANAL OFFICE,

ST. CATHARINES, ONT., April, 1913.

SIR,—

During the past few years, while filling the position of superintending engineer of the Welland canal, I had several survey parties in the field working on the location of a proposed Welland ship canal.

Three routes west of the present canal were covered, but all were considered unsatisfactory on account of the poor quality of the material found in the sites of the heavy structures.

The route finally adopted was not considered seriously until 1910, as at first consideration the difficulties to be encountered in putting a canal through on this route seemed insurmountable, as the present canal has to be crossed twice, the canal had to go under the main line of the Grand Trunk railway and the most difficult section of the Grand Trunk Welland division had to be relocated, viz.: where it climbs the mountain.

Careful study of the questions involved, however, gradually eliminated the difficulties and a splendid location for the ship canal was the result.

By Order in Council dated May 3, 1912, I was transferred from the present canal to the position of engineer-in-charge of survey, design and construction of the Welland Ship canal. I immediately rented a vacant flat for an office, and commenced gathering a staff together. It has been impossible to obtain men who have had canal experience, but I have been very successful in obtaining the services of a fine lot of young men who have taken great interest in the work, with the result that the contract plans for the whole work are now in an advanced state, almost ready for the calling of tenders.

During the summer of 1912 I had a fine office building erected in the rear of the present canal office at the corner of Yate and St. Paul streets, St. Catharines, into which we moved in January, 1913. The new office is fully equipped and enables good work to be turned out with despatch.

Last month in company with yourself, I spent eight days in the Isthmus of Panama. This visit confirmed all the previous impressions I had formed as to this great work, and completely satisfied me that my designs, while differing radically from the Panama canal, are fully equal if not superior to them or the conditions to be met with in the proposed Welland ship canal.

The proposed Welland ship canal as finally located follows the course of the present canal from Port Colborne on Lake Erie to Allanburg, half way across the peninsula. From this point an entirely new cutting is to be made, crossing the present canal just below lock No. 25, the water level of the two canals at this point being the same, viz.: 568 feet above sea level. The new canal again crosses the present one below lock No. 11, the water of both canals at this point being at an elevation of 382 feet above sea level.

The proposed canal enters Lake Ontario at the mouth of the Ten Mile Creek about three miles east of Port Dalhousie, the entrance to the present canal. The total length of canal from lake to lake is 25 miles, and the difference in level between the two lakes, 325½ feet, is to be overcome by seven lift locks, each having a lift of 46½ feet. The dimensions of the locks are to be 800 feet in length by 80 feet in width in the clear and with 30 feet of water over the mitre sills at extreme low stages in

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the lakes. The width of the canal at the bottom will be 200 feet and for the present the canal reaches will be excavated to a depth of 25 feet only, but all structures will be sunk to the 30 foot depth, so that the canal can be deepened at any future date by the simple process of dredging out the reaches.

A new spur on the western breakwater, consisting of an immense rubble mound of stone from the excavation north of Port Colborne, and terminating in a timber and concrete head-block, located some 2,000 feet farther out in the lake than the present breakwater, will be built to insure quiet water in Port Colborne harbour during storms, which is not the case now, the present breakwater not being far enough out in the lake to deaden the swells.

The outer harbour at Port Colborne has now a 22-foot depth of water at ordinary stages of the lake, which is as much as is available at most of the lake ports and in the channels connecting the lakes at the present time, and the deepening of this portion of the harbour may be left for a few years until the connecting channels in the lakes allow deeper navigation.

The inner harbour at Port Colborne will be deepened to the proposed new depth and the old locks and regulating weir now in the centre of the village will be entirely removed. The rock cut from Port Colborne to Humberstone will be deepened and widened on the west side, and just below Humberstone a thorough cut will be made across the point now forming Ramey's Bend to materially straighten the canal. The materials from these cuts will be nearly all rock, and will be used to form the breakwater previously mentioned. A guard lock will be built in the rock cutting a short distance below Humberstone, and when this new cutting is ready for navigation a regulating weir will be built across the abandoned portion of the present canal which will be used as a by-pass to furnish water to the canal. This lock and regulating weir will control the elevation of the summit level of the canal, which it is proposed to keep at the level of extreme low water in Lake Erie, viz.: 568 feet above sea level.

From Ramey's Bend to Welland the canal will be deepened and widened by excavating a strip along the western bank. Instead of building a new aqueduct at Welland to carry the canal over the Welland river, it is proposed to raise the level of the river to that of the summit level of the canal, viz.: 568 feet above sea level by means of a dam across the river at Port Robinson. This dam will be provided with a large overflow and regulating weir which will control the elevation of the summit level, allowing any surplus water to overflow into the old Welland river and pass out into the Niagara river at Chippawa as at present, a sufficient quantity of water will be allowed to run constantly to keep the river clean.

The present aqueduct at Welland will be dredged out, also the bank between the canal and the river, which latter will be utilized between Welland and Port Robinson instead of the present canal, being somewhat straighter and entailing considerably less excavation. At Port Robinson a cut will be made through the present bank between the canal and the river through which vessels will again enter the canal prism.

The raising of the Welland river above Welland will flood some 1,600 acres of low land adjoining the river bed. This land is flooded every spring by the flood water in the river and is principally used for pasturage. The township of Wainfleet adjoining the Welland river on the south side, consists principally of low lying ground which drains into the Welland river, and to prevent damage to this land on account of the raising of the river, it will be necessary to open up most of the ditches from the point of their present entrance to the river to the intended high water mark.

The turning of the Welland river into the canal will pollute the waters which are at present used by the towns of Welland, Thorold and Merriton, and by the city of St. Catharines for domestic purposes. This may necessitate the construction of extensive filtering plants, which scheme is not looked upon with favour by those interested. An alternative scheme to lay a pipe line from Lake Erie to the reservoirs

of the different municipalities, through which clean water would be continuously pumped, is under consideration, and appears to be the most feasible scheme available.

Between Port Robinson and Allanburg what is known as the deep cut (deepest cutting 80 feet) will be deepened and widened by cutting a slice off the western bank. Allanburg is now the junction of the present and old Welland canals, and the water required for the latter, which is quite considerable on account of the numerous power developments along it, is taken into the canal through a weir at this point.

In connection with the construction of the ship canal, it is proposed to close the present old canal entirely between Allanburg and Marlatts Bridge near Thorold, first building a new weir at the head of lock No. 25 of the present canal to supply the above mentioned water. A dam will then be thrown across the old canal at Allanburg, and the old bed of the canal between the dam and Marlatts Bridge will be utilized as a dumping ground in which to place the material removed from above water in widening the deep cut. This will form a very convenient dumping ground, and the old canal will become more self-contained, as at present the entrance works are situated at an inconvenient distance from the remainder of the canal.

If it is desired to continue navigation on the old canal, entrance may be had to it through lock No. 25 of the present canal when the ship canal is completed by making a short cut through the bank separating the two waterways.

A pair of twin guard gates are located on the proposed canal near the southerly limits of the town of Thorold, and a short distance north of them is located lock No. 7, the head of this lock being directly opposite the head of lock No. 24 on the present canal. That portion of the present canal between locks No. 25 and 24 together with a pond of about 27 acres formed by flooding the upper valley of the Ten Mile creek will be utilized as a regulating basin from which water to fill lock No. 7 will be drawn. This method of drawing water from a side pond instead of directly from the canal above avoids the formation of objectionable currents and surges in the canal and locks, and is the method adopted for filling all of the locks.

Below lock No. 7 is a short reach of canal with an adjacent side pond or regulating basin having a surface area of about 84 acres, and immediately below are located twin locks Nos. 6, 5 and 4 in flight. These three locks overcome a descent of 139½ feet. One flight will be used for down bound vessels and the adjoining flight for up bound, a double flight being required to save long delays in the passage of vessels through the canal.

The main line of the Grand Trunk railway between St. Catharines and Niagara Falls will cross over the foot of twin locks No. 4 by means of two short Bascule lift bridges.

The Welland division line of the Grand Trunk railway is situated just where the new locks are to be built, and it will be necessary therefore to divert it some distance to the west, and the diverted line will bear the same relation to the proposed canal as the present line does to the present canal, following up on the west side of the locks, but remaining on the west side of the canal for some distance above the present lock No. 25, when it crosses over the proposed canal on a Bascule lift bridge to the east side.

From lock No. 4 the proposed canal crosses the meadow to the north, following in part the bed of the Ten Mile creek till it crosses the present canal at the foot of lock No. 11 at an elevation of 382 feet above sea level, which is the level of the present canal at that point. This will enable small vessels which wish to do so, to use the Port Dalhousie entrance as at present, as far as lock No. 11.

Lock No. 3 is located immediately north of the present canal, and at its head on the east side is situated an equalizing basin or pond of 150 acres. Below No. 3 a heavy cutting is required through the village of Homer to the bed of the Ten Mile creek again, above Carleton street, and just below Carleton street lock No. 2 is located. It was difficult to find a location for this lock on account of the lack of rock for a

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foundation, but eventually a suitable foundation was found at the present site. The canal at the head of lock No. 2 is at an elevation of 335½ feet above sea level, and floods about 200 acres of land in and adjoining the bed of the Ten Mile creek. Below lock No. 2 the canal follows the bed of the creek to the lake, lock No. 1 being situated just below the lake road. The pond at the head of lock No. 1 covers an area of 107 acres.

The outer entrance piers in Lake Ontario are placed about one and one-half miles from shore, where the depth of water is 30 feet. A wide channel will be dredged from these piers to lock No. 1. The sides of this channel will be protected near the shore end by reinforced concrete cribs with concrete superstructure, alongside which vessels may lie. From the shore line of the lake to the outer entrance piers an embankment about 500 feet in width will be formed on either side of the channel from materials excavated from the canal between the lake and Thorold.

For the purpose of conveying this material from the different contracts to the lake, the Department will build a double track railway along the west side of the canal from the foot of the flight locks near Merriton to the lake, and temporary trestles will be built out in the lake on either side of the harbour from which to start the dumps. The railway will also be utilized to haul crushed stone from the site of the flight locks to locks Nos. 1, 2 and 3, where it will be used for the purpose of making concrete.

The contractor for the rock excavation from the site of the flight locks will, under his contract, be obliged to crush a sufficient quantity of the good rock taken from his excavation to supply all the crushed stone required for making all the concrete for the different locks and structures.

The lock walls will be 82 feet high above the top of the gate sills and including the necessary foundation work required below this level two of the locks will have walls 100 feet high.

The lock gates will be of the single leaf type, swinging on a hinge at one side of the lock, and resting when closed in a notch cut in the opposite wall, a single leaf thus spanning the whole width of the lock chamber. The gate at the foot of each lock will be 83 feet in height and 88 feet in length, and will weigh about 1,100 tons.

The valves and culverts in the walls are of large dimensions and will permit of the lock being filled in less than eight minutes. This will mean that the time of passage through the canal will be very much reduced below that required at present.

The canal will be divided into nine sections for contract and construction purposes.

The contractor for each section will be required to supply all plant and labour to efficiently carry out the work of excavation and the construction of all structures such as locks, weirs, substructures of bridges, entrance piers, &c. He will also supply all necessary materials required in the construction of the above excepting Portland cement and certain metal work which will be furnished by the Department.

The furnishing of Portland cement to the contractors has been found a very satisfactory method on other contracts with the Department and this method will be adopted in all contracts on the ship canal.

All steel and iron castings and other metal work which is standard for all locks, &c., will also be furnished to the different contractors to be placed in position in the concrete masonry of locks, weirs, bridges, &c.

The building and erection of the lock gates will form a separate contract.

The steel superstructure of bridges will be built under separate contracts.

The following estimated quantities will give an idea of the magnitude of the work :—

Rock excavation. . . . .	6,000,000 cubic yards.
Earth " . . . . .	40,000,000 "
Concrete. . . . .	2,500,000 "

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A careful and conservative estimate places the total cost of the work at less than \$50,000,000.

The canal should be ready for navigation in five years.

I am, sir,

Your obedient servant,

J. L. WELLER,

*Engineer in Charge.*

W. A. BOWDEN, Esq.,

Chief Engineer,

Department of Railways and Canals,

Ottawa, Ont.

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## HUDSON BAY RAILWAY.

ENGINEERING DEPARTMENT,

WINNIPEG, August 4, 1913.

Mr. W. A. BOWDEN,

Chief Engineer,

Department of Railways and Canals,  
Ottawa, Ont.

DEAR SIR,—I beg to report as follows upon the condition of the work on the Hudson Bay railway up to March 31, 1913.

Two location parties under Messrs. Lawledge and Silcox have completed the location of the railway to Port Nelson, subject to some local revisions which will be made the present summer.

The line finally adopted, recrosses to the left bank of Nelson river at Kettle rapids, where a good crossing has been secured about 1,000 feet in length over all, with a cantilever span of about 650 feet over the main channel.

With the exception of this crossing the work will be light. Ballast in considerable quantities has been found at convenient intervals between Manitou rapids and Port Nelson.

At the south end grading has been completed with the exception of a few small gaps, as far as Mile 70 and 90 per cent of the clearing as far as Thicket Portage, Mile 185.

Supplies sufficient to complete this work have been placed on the ground by the contractors and the whole 185 miles should be ready for track by the spring of 1914.

Arrangements are being made also to place supplies on the second contract from Thicket Portage to Split Lake Junction, and considerable progress is expected on this work before the spring of 1914.

An effort is also to be made to commence work on the third contract from Split Lake Junction to Port Nelson.

Track-laying will commence in May and this season should see something over 100 miles laid, depending upon the supply of ties, which have been proven somewhat difficult to obtain.

At the present time the contractors are endeavouring to increase the supply of ties, but it is difficult at present to say to what extent they will be successful as far as this season's work is concerned.

Yours truly,

J. ARMSTRONG,

*Chief Engineer.*

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DARTMOUTH, N.S., 8th August, 1913.

W. A. BOWDEN, Esq.,  
Chief Engineer,  
Department of Railways and Canals,  
Ottawa, Ont.

DEAR SIR,—I beg to report the progress made on the construction of the Dartmouth to Deans branch of the Intercolonial Railway, during the fiscal year ended March 31, 1913.

The length of the whole line, as originally located from end of I.C.R. track at Woodside to Deans Settlement is 73 miles. As it appeared that the same amount of traffic, and practically equal service to public, could be obtained without building the full distance, it was subsequently decided to make Upper Musquodoboit the eastern terminus, reducing the length to 67 miles.

For engineering purposes this was divided into seven residencies, each placed in charge of a resident engineer, with junior assistants, axemen, &c. An office was opened at Dartmouth; a Principal Assistant Engineer, Office Engineer, Auditor, and Draughtsman were appointed. Inspectors of concrete, ties, fencing and timber, were employed as required.

The contract with Messrs. M. P. and J. T. Davis (represented on the work by Messrs Caviechi & Pagano) for the construction of the whole work, except steel bridge superstructure, station houses, water services and telegraph line, is dated 16th February, 1912. Clearing the right of way commenced at the Dartmouth end on 19th February, 1912, and subsequently at other points along the line, and was practically finished during 1912.

Grading commenced at Musquodoboit Harbour (mile 34) in March, 1912; at Lawrencetown (mile 11 to mile 15); Porters Lake (mile 15 to mile 16); and West Chezzetcook (mile 21 to mile 22) in April; at Crawfords Falls (mile 41); Little River (mile 48); Middle Musquodoboit (mile 53 to mile 55); and Upper Musquodoboit (mile 65 to mile 67) in May; and at Woodside (mile 1); and Meaghers Grant (mile 43 to mile 46) in June. The Woodside work being done by steam shovel and train.

The parties having the work directly in hand at Lawrencetown and Porters Lake, suspended work in May, 1912, and this part of the work remained idle until September, when steam shovel was installed, with light engine and cars. This steam shovel, and the one working between Woodside and Cole Harbour, and the force employed on the rock work in the granite section between Musquodoboit Harbour and Meaghers Grant continued all winter. Work at all other parts of line, except a very small force at Chezzetcook, closed down in December.

Concrete work commenced in June, 1912, and continued until suspended in November, by reason of frost.

The average daily force from June to October, on all classes of work was, 46 foremen, 30 mechanics and 427 labourers; in the earlier and later parts of the year, 39 foremen, 20 mechanics, and 359 labourers; the steam shovels, of course, being equivalent to a considerable force of additional labourers.





## PART VII

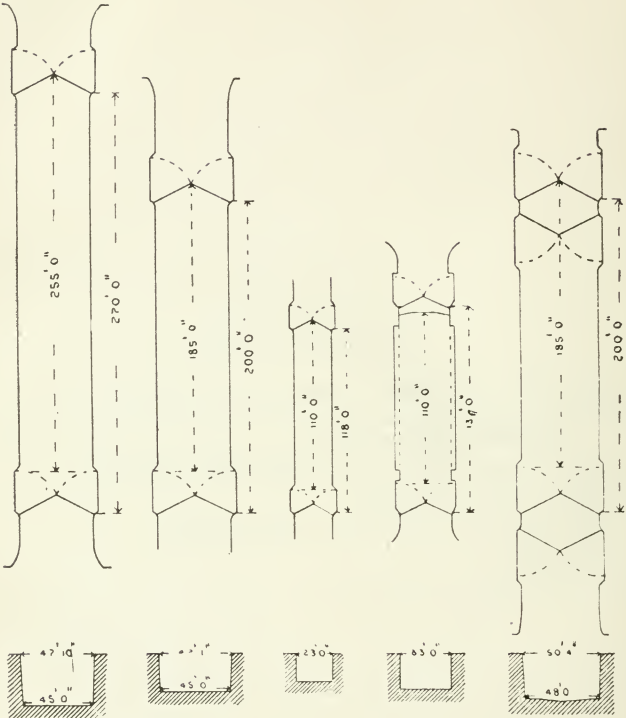
# CANALS

Diagrams showing dimensions of smallest lock on each canal. &c.

Dimensions and other features of the several canal works, and description of the intermediate water navigations:

1. Between Montreal and Port Arthur or Fort William, Lake Superior.
2. Montreal, Ottawa and Kingston.
3. River Richelieu and Chambly Canal to Lake Champlain.
4. Trent Canal.
5. St. Peter's Canal.

Plans and Sections showing Dimensions of the Smallest Lock on each



Lachine

St Anne,  
St Ours,  
Carillon,  
& Grenville.

Chambly

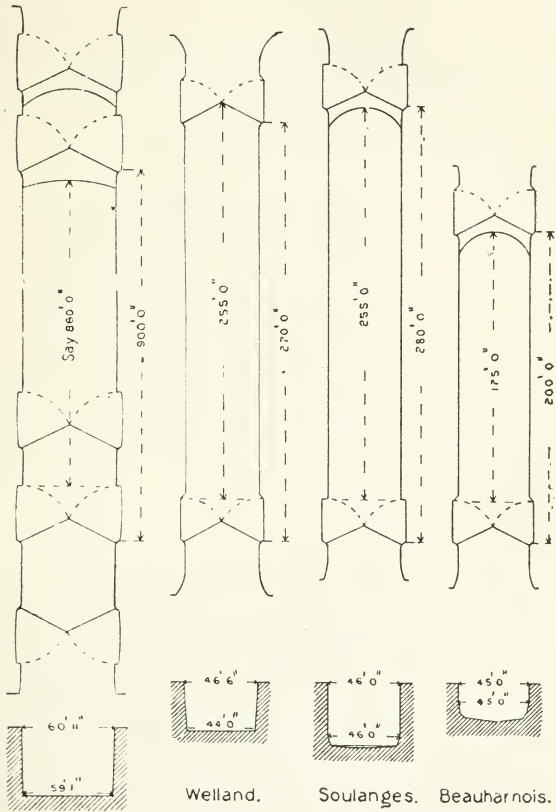
Rideau

St Peter's

There are no locks on the through route between Lake Superior and

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of the Canadian Canal System except the Trent Canal, which is uncompleted.

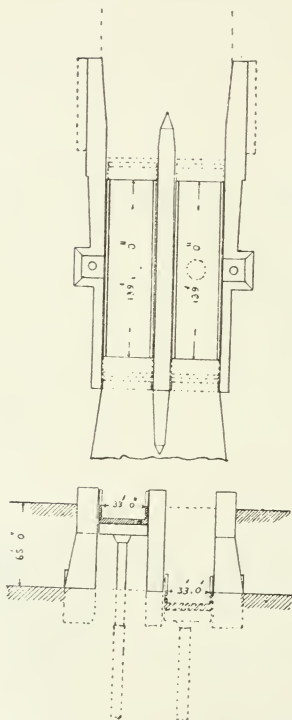


Sault Ste. Marie.

Montreal of less dimension than those of the Welland Canal Locks.

## TRENT CANAL

Hydraulic Lift-Lock at Peterborough  
65 Feet Lift.



## CANALS

The following statements give in concise form the essential features of the government canal works and the intermediate water navigation.

The canal systems of the Dominion, under government control in connection with lakes and navigable rivers are as follows:—

*First.—The through route between Montreal and Port Arthur or Fort William on the west shore of Lake Superior (14 feet minimum depth of water.)*

	Statute Miles.
1. Lachine canal. . . . .	8½
Lake St. Louis and River St. Lawrence. . . . .	16
2. Soulanges canal. . . . .	14
Lake St. Francis and River St. Lawrence. . . . .	31
3. Cornwall canal. . . . .	11½
River St. Lawrence. . . . .	5
4. Farrans Point canal. . . . .	1½
River St. Lawrence. . . . .	9½
5. Rapide Plat canal. . . . .	3½
River St. Lawrence. . . . .	4½
6. Galops canal. . . . .	7½
River St. Lawrence and Lake Ontario. . . . .	228
7. Welland canal. . . . .	26¾
Lake Erie, Detroit river, Lake St. Clair, Lake Huron, &c. . . . .	574
8. Sault Ste. Marie canal. . . . .	1½
Lake Superior to Port Arthur or to Fort William. . . . .	272
Total. . . . .	1,214
To Duluth. . . . .	1,336
Chicago. . . . .	1,240

*Second.—Montreal to International Boundary, near Lake Champlain.*

	Statute Miles.
1. St. Lawrence river to Sorel. . . . .	46
2. Sorel, via Richelieu river, to St. Ours lock. . . . .	14
3. St. Ours lock. . . . .	½
4. Richelieu river, St. Ours lock, to Chambly canal. . . . .	32
5. Chambly canal. . . . .	12
6. Chambly canal to boundary line. . . . .	23
Total. . . . .	127½

*Third.—Montreal to Ottawa.*

	Statute Miles.
1. Lachine canal. . . . .	8½
2. Lake St. Louis. . . . .	15
St. Anne's lock at outlet of Ottawa river. . . . .	¼
Lake of Two Mountains and Ottawa river. . . . .	27
3. Carillon canal. . . . .	¾
Ottawa river. . . . .	6¼
4. Grenville canal. . . . .	5¾
Ottawa river to Ottawa. . . . .	56
Total. . . . .	119¾

*Fourth.—Ottawa to Kingston and Perth.*

	Statute Miles.
1. Rideau canal, Ottawa to Kingston.. . . . .	126 $\frac{1}{4}$
Perth Branch.—Rideau lake to Perth.. . . . .	7
Total.. . . . .	133 $\frac{1}{4}$

*Fifth.—Lake Ontario, at Trenton, to Lake Huron.*

- 1. Trent canal,—not completed.

*Sixth.—Atlantic Ocean to Bras d'Or Lakes, Cape Breton.*

	Statute Miles.
1. St. Peter's canal.. . . . .	$\frac{1}{2}$

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Strait of Belle Isle to Port Arthur or Fort William on the west coast of Lake Superior, a distance of 2,217 statute miles. The distance to Duluth is 2,339 miles; the distance to Chicago, 2,243 miles. From the Strait of Belle Isle, at the mouth of the St. Lawrence, to Montreal, the distance is 1,003 statute miles. From Quebec to Montreal the distance is 160 miles.

The control of the St. Lawrence ship channel, and the making of improvements thereto, are now under the Department of Marine and Fisheries, whose annual reports give full information as to the history and improvement of the channel. A 30-foot channel between Montreal and Father Point—with a width of 450 feet in the straight portions, and of from 600 to 750 feet in the bends between Montreal and Quebec, and of 1,000 feet everywhere below Quebec—has been practically completed. In 1909 the first work of deepening the ship channel to 35 feet was begun.

By means of channel improvements, Montreal has been placed at the head of ocean navigation, and here the canal systems of the River St. Lawrence begin, overcoming the several rapids by which the river channel upwards is obstructed, and giving access through the St. Lawrence canals, the Welland canal, the Great Lakes and the Sault Ste. Marie canal to the head of Lake Superior.

The difference in level between the point on the St. Lawrence, near Three Rivers, where tidal influence ceases, and Lake Superior, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Superior, are the Lachine, Soulanges, Cornwall, Farrans Point, Rapide Plat, Galops, Murray, Welland and Sault Ste. Marie. Their aggregate length is 74 miles; total lockage (or height directly overcome by locks), 553 $\frac{1}{4}$  feet. The number of locks through which a vessel would pass in its passage from Montreal, at the head of ocean navigation, to the head of Lake Superior, is 48. The Soulanges canal takes the place of the Beauharnois canal, abandoned for navigation purposes, and the Murray canal is used only by the coasting vessels on Lake Ontario. It is not a part of the through route.

It is important to note that the enlargement of canals on the main route between Montreal and Lake Erie comprises locks of the following minimum dimensions: length, 270 feet; width, 45 feet; depth of water on sills, 14 feet. The length of vessels to be accommodated is limited to 255 feet. At Farrans Point, in the canal of that name, the lock is 800 feet long. A similar lock is built at Iroquois, on the Galops canal, the object being to pass a full tow at one lockage. The lock at Sault Ste. Marie is 900 feet by 60 feet, with 18 feet 3 inches on the sills at lowest known water level.

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Access from Lake Erie to Lake Huron is obtained by way of the Detroit river, Lake St. Clair, and the St. Clair river, which have been deepened to a minimum of 21 feet, principally by the United States government.

Communication between Lakes Huron and Superior is obtained by means of the Canadian Sault Ste. Marie canal, and also by the St. Mary's Falls canals, situated on the United States side of the River St. Mary. Improvements of the United States channels in River St. Mary through Hay lake, east of Sault Ste. Marie, have been carried on for several years past. The dredged areas now total 34 miles in length, with a minimum width of 300 feet, which is increased at angles and other critical points to 1,000 feet. The depth is 20 feet at the mean stage of water. In the year 1903 excavation was commenced to afford 21 feet at the lowest stage of water.

The improvement of Canadian channels from above Montreal to the head of Lake Superior is controlled by the Department of Public Works. Work is now under way to dredge the channel in the River St. Mary to 21.5 feet below L.W.L., the existing minimum depth being 18.75 feet below L.W.L. Existing depths elsewhere between Lakes Erie and Superior give a minimum of 21 feet below L.W.L. The Limekiln channel in the Detroit river has been deepened to 21 feet; and the United States government has opened the Livingstone channel in the same (Detroit river) with a depth of 22 feet.

The improvements at the harbours of Fort William and Port Arthur now under way will give a minimum depth of 25 feet below L.W.L. This depth exists at present over the channels leading to the principal wharves.

The provisions and maintenance of aids to navigation on all Canadian river and lake channels is controlled by the Department of Marine and Fisheries.

The Sault Ste. Marie, Welland, Cornwall, Soulages and Lachine canals are well lighted throughout by electricity, and are electrically operated. The Farrans Point canal is lighted with acetylene gas.

Navigation, which is closed by ice during the winter months, opens about the end of April on the Great Lakes and St. Lawrence route. Ice-breaking steamers are now employed to lengthen the navigable season at Lake Superior and Georgian Bay terminals.

## STATEMENT OF PRESENT MINIMUM DEPTH OF IMPROVED CHANNELS.

Father Point to Montreal. . . . .	30 feet.
Montreal to Port Colborne. . . . .	14 "
Port Colborne to Fort William. . . . .	18 $\frac{3}{4}$ "

## LACHINE CANAL.

Length of canal. . . . .	8 $\frac{1}{2}$ statute miles.
Number of locks. . . . .	5
Dimensions of locks. . . . .	270 feet by 45 feet.
Total rise or lockage . . . . .	45 feet.
Depth of water on sills, at two locks. . . . .	18 "
Depth of water on sills, at three locks. . . . .	14 "
Average width of new canal. . . . .	150 "

The old lift locks, 200 feet by 45 feet, are still available, with 9 feet of water on mitre sills. The two lower north locks, however, have been lengthened to 270 feet, and have 16 $\frac{1}{2}$  feet of water on the sills.

The canal consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two lock entrances at each end.

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The canal extends from the city of Montreal to the town of Lachine, overcoming the St. Louis rapids, the first of the series of rapids which bar the ascent of the River St. Lawrence. They are 986 miles distant from the Strait of Belle Isle.

## SOULANGES CANAL.

Length of canal...	14 statute miles.
Number of locks—	
Lift...	4
Guard...	1
Dimensions of locks...	280 feet by 45 feet.
Total rise or lockage...	84 feet.
Depth of water on sills...	13 "
Breadth of canal at bottom...	100 "
Breadth of canal at water surface...	164 "

The canal extends from Cascade Point to Coteau Landing, overcoming the Cascades rapids, Cedar rapids and Coteau rapids.

From the head of the Lachine to the foot of the Soulanges canal the distance is sixteen miles.

## CORNWALL CANAL.

Length of canal...	11 statute miles.
Number of locks...	6
Guard gates...	1
Dimensions of locks...	270 feet by 45 feet.
Total rise or lockage...	48 feet.
Depth of water on sills...	14 "
Breadth of canal at bottom...	90 "
Breadth of canal at water surface...	154 "

The old lift locks, 200 feet by 55 feet, are also available with nine feet of water on mitre sills.

From the head of the Soulanges to the foot of the Cornwall canal there is a stretch through Lake St. Francis 31 miles, which is navigable for vessels drawing fourteen feet.

The Cornwall canal extends past the Long Sault rapids from the town of Cornwall to Dickinson's Landing.

## WILLIAMSBURG CANALS.

The Farrans Point, Rapide Plat and Galops canals are collectively known as the Williamsburg canals.

## FARRANS POINT CANAL.

Length of canal...	1½ mile.
Number of locks...	1
New lock...	800 feet by 50 feet.
Old lock...	200 " 45 "
Total rise or lockage...	3½ feet.
Depth of water on sills of new lock...	14 "
Depth of water on sills of old lock...	9 "
Breadth of canal at bottom...	90 "
Breadth of canal at water surface...	154 "

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From the head of the Cornwall canal to the foot of Farrans Point canal the distance on the River St. Lawrence is five miles. The latter canal enables vessels ascending the river to avoid Farrans Point rapids, passing the full tow at lockage. Descending vessels run the rapids with ease and safety.

## RAPIDE PLAT CANAL.

Length of canal. . . . .	3 $\frac{2}{3}$ miles.
Number of locks. . . . .	2
Dimensions of locks. . . . .	270 feet by 45 feet.
Total rise or lockage. . . . .	11 $\frac{1}{2}$ feet.
Depth of water on sills. . . . .	14 "
Breadth of canal at bottom. . . . .	80 "
Breadth of canal at water surface. . . . .	152 "

The old lift-lock, 200 feet by 45, is also available with nine feet of water on mitre sills.

From the head of Farrans Point canal to the foot of Rapide Plat canal there is a navigable stretch of 9 $\frac{1}{2}$  miles. The canal was formed to enable vessels ascending the river to pass the rapids at that place. Descending vessels run the rapids safely.

## GALOPS CANAL.

Length of canal. . . . .	7 $\frac{1}{2}$ miles.
Number of locks. . . . .	3
Dimensions of locks—	
Lift-lock at foot of canal. . . . .	800 by 50 feet.
Guard-lock at head of canal. . . . .	270 by 45 "
Lift-lock to pass vessels around Galops rapids only. . . . .	303 by 45 "
Total rise or lockage. . . . .	15 $\frac{1}{2}$ feet.
Depth of water on sills. . . . .	14 "
Breadth of canal at bottom. . . . .	80 "
Breadth of canal at surface of water. . . . .	144 "

From the head of Rapide Plat canal to Iroquois, at the foot of the Galops canal the St. Lawrence is navigable 4 $\frac{1}{2}$  miles. The canal enables vessels to overcome the rapids at Pointe aux Iroquois, Point Cardinal and the Galops.

## MURRAY CANAL.

Length between eastern and western piers. . . . .	5 $\frac{1}{2}$ miles.
Breadth at bottom. . . . .	80 feet.
Breadth at water surface, low water, Lake Ontario. . . . .	124 "
Depth below low water, Lake Ontario. . . . .	11 "
Number of locks. . . . .	None.

This canal extends through the Isthmus of Murray, giving connection westward between the head waters of the Bay of Quinté and Lake Ontario, and thus enabling vessels to avoid the open lake navigation.

WELLAND CANAL.

Main line from Port Dalhousie, Lake Ontario, to Port Colborne, Lake Erie.

	Old line.	Enlarged or new line.
Length of canal. . . . .	27½ miles.	26¾ miles.
Pairs of guard-gates (formerly 3). . . . .	2	1
Number of locks—		
Guard. . . . .	1	1
Lift. . . . .	26	25
Dimensions. . . . .	<div><div><div>1 (tidal) 230 x 45</div><div>1 lock 200 x 45</div><div>1 lock 270 x 45</div><div>24 locks 150 x 26½</div></div><div>270 feet x 45 feet.</div></div>	
Total rise or lockage. . . . .	326¾ feet.	326¾ feet.
Depth of water on sills. . . . .	10¼ "	14 "

WELLAND RIVER BRANCHES.

Length of canal—	
Port Robinson Cut to River Welland. . . . .	2,622 feet.
From the canal at Welland to the river, via lock at Aqueduct. . . . .	300 "
Chippewa Cut to River Niagara (6-ft. navigation only). . . . .	1,020 "
Number of locks—one at Aqueduct and one at Port Robinson. . . . .	2
Dimensions of locks. . . . .	150 x 26½ feet.
Total lockage from the canal at Welland down to River Welland. . . . .	10 feet.
Depth of water on sills. . . . .	9 feet 10 inches.

GRAND RIVER FEEDER.

Length of canal. . . . .	21 miles.
Number of locks. . . . .	2
Dimensions of locks. . . . .	<div><div>1 of 150 by 26½ ft.</div><div>1 of 300 by { 45 ft. lower.</div><div>28 ft. upper.</div></div>
Total rise or lockage. . . . .	
Depth of water on sills. . . . .	6 " only.
Navigable depth of channel. . . . .	9 "

PORT MAITLAND BRANCH.

Length of canal. . . . .	1¾ miles.
Number of locks. . . . .	1
Dimensions of locks. . . . .	185 feet by 45 feet.
Depth of water on sills. . . . .	7½ feet.
Total rise or lockage. . . . .	7 "
Navigable depth of channel. . . . .	6 " only.

The Welland canal has two entrances from Lake Ontario at Port Dalhousie, one for the old, the other for the new canal.

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From Port Dalhousie to Allanburg, 11 $\frac{3}{4}$  miles, there are two distinct lines of canal in operation, the old line and the enlarged or new line.

From Allanburg to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

From the head of the Welland canal there is a deep water navigation through Lake Erie, the Detroit river, Lake St. Clair, the St. Clair river, Lake Huron and River St. Mary to the Sault canal, a distance of about 580 miles. From the Sault the distance through Lake Superior to Port Arthur is 274 miles, and to Duluth 397 miles.

## SAULT STE. MARIE CANAL.

Length of canal, between the extreme ends of the entrance piers. . . . .	1 $\frac{1}{30}$ miles or 7,472 feet.
Number of locks. . . . .	1
Dimension of locks. . . . .	900 feet by 60 feet at water level; width at lock bottom, 59 feet.
Depth of water on sills (at lowest known water level). . . . .	18 feet 3 inches.
Total rise or lockage (mean). . . . .	19 feet.
Breadth of canal at bottom. . . . .	141 feet 8 inches.
Breadth at surface of water. . . . .	150 feet.

This canal has been constructed through St. Mary's island, on the north side of the rapids of the River St. Mary, and, with that river, gives communication on Canadian territory between Lakes Huron and Superior.

## MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine canal, the navigation section of the lower River Ottawa, and the Ottawa canals, to the city of Ottawa: thence by the River Rideau and the Rideau canal to Kingston, on Lake Ontario—a total distance of 245 $\frac{5}{8}$  miles.

After leaving the Lachine canal the works constructed to overcome difficulties of navigation are:—

## OTTAWA RIVER CANALS.

The Ste. Anne's Lock.      Carillon Canal.      Grenville Canal.

## RIDEAU CANAL.

The total lockage (not including that of the Lachine canal) is 509 feet (345 rise, 164 fall) and the number of locks is 55.

The following table exhibits the intermediate distances from Montreal harbour:—

Sections of Navigation.	Interme- diate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine Canal. . . . .	8½	
From Lachine to Ste. Anne's Lock. . . . .	15	23½
Ste. Anne's Lock and piers. . . . .	½	23½
Ste. Anne's Lock to Carillon Canal. . . . .	27	50½
The Carillon Canal. . . . .	3	51½
From Carillon to Grenville Canal. . . . .	6½	57½
The Grenville Canal. . . . .	3½	61½
From the Grenville Canal to entrance of Rideau Navigation. . . . .	56	119½
Rideau Navigation ending at Kingston. . . . .	126½	245½
"        Perth Branch, from Rideau Lake to Perth. . . . .	7	195

STE. ANNE'S LOCK.

	New Lock.	Old Lock.
Length of canal. . . . .	½ mile.	½ mile.
Number of locks. . . . .	1	1
Dimensions of locks. . . . .	200 x 45 feet.	190 x 45 feet.
Total rise or lockage. . . . .	3 "	3 "
Depth on sills. . . . .	9 "	6 "

This work, with guide piers above and below, surmounts the Ste. Anne's rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the River Ottawa which forms the Lake of Two Mountains, 23½ miles from Montreal harbour.

THE CARILLON CANAL.

Length of canal. . . . .	¾ mile.
Number of locks. . . . .	2
Dimensions of locks. . . . .	200 x 45 feet
Total rise or lockage. . . . .	16 feet.
Depth of water on sills. . . . .	9 "
Breadth of canal at bottom. . . . .	100 "
Breadth of canal at water surface. . . . .	110 "

This canal overcomes the Carillon rapids.

From Ste. Anne's lock to the foot of the Carillon canal is a navigable stretch of 27 miles, through the Lake of Two Mountains and River Ottawa.

By the construction of the Carillon dam across the River Ottawa the water at that point is raised 9 feet, enabling the river above to be used for navigation.

GRENVILLE CANAL.

Length of canal. . . . .	5¾ miles
Number of locks. . . . .	5
Dimensions of locks. . . . .	200 x 45 feet.
Total rise or lockage. . . . .	43¾ feet.
Depth of water on sills. . . . .	9 "
Breadth of canal at bottom. . . . .	40 to 50 feet.
Breadth of canal at surface of water. . . . .	50 to 80 "

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This canal, by which the Long Sault rapids are avoided, is about 56 miles below the city of Ottawa, up to which point the River Ottawa affords unimpeded navigation.

## RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa at the city of Ottawa with the eastern end of Lake Ontario at Kingston.

Length of navigation.. . . . .	126½ miles.
Number of locks from Ottawa to Kingston.. . . . .	{ 33 ascending. 14 descending.
Total lockage ..457½ feet. { 292¼ rise and } { 165½ fall.            }	at low water.
Dimensions of locks.. . . . .	134 x 33 feet.
Depth of water on sills.. . . . .	5 feet.
Navigation depth through the several reaches.. . . . .	5 feet.
Breadth of canal reaches at bottom.. . . . .	{ 54 feet in rock. 60 feet in earth.
Breadth of canal at surface of water.. . . . .	80 feet in earth.

## PERTH BRANCH.

Length of canal.. . . . .	7 miles.
Number of locks.. . . . .	2
Dimensions of locks.. . . . .	134 feet x 33 feet.
Total rise or lockage.. . . . .	26 "
Depth of water on sills.. . . . .	5 " 6 inches.
Length of dam.. . . . .	200 "
Breadth of canal at surface of water.. . . . .	80 "
Breadth of canal at bottom.. . . . .	{ 40 " in rock. 60 " in clay.

The Perth branch of the Rideau canal affords communication between Beveridge's bay, on Lake Rideau, and the town of Perth.

The summit level of the Rideau system is at upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply:—

From the summit, the route towards Ottawa follows the Rideau river, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz.:—

1. The summit level, supplied by the Wolf lake system.
2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau.
3. The southwest descending level to Kingston, supplied by the Mud lake system, formerly known as the Devil lake system, discharging into Lake Opinicon.

Lake Opinicon receives the waters of Buck lake and Rock lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow to Cranberry lake, which, discharging through Round Tail outlet, forms the River Cataraqui. The river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

## RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu, through

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the St. Ours lock to the basin at Chambly; thence, by the Chambly canal, to St. Johns, and up the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, at the southern end of Lake Champlain, connection is obtained by means of the Champlain canal with the River Hudson, by which the city of New York is directly reached.

The following table shows the distances between Sorel and New York:—

Sections of Navigation.	Inter- mediate Distance.	Total Distances.
	Miles.	Miles.
Sorel to St. Ours Lock.....	14	14
St. Ours Lock to Chambly Canal.....	32	46
Chambly Canal.....	12	58
Chambly Canal to boundary line.....	23	81
Boundary line to Champlain Canal.....	111	192
Champlain Canal to junction with Erie Canal.....	66	258
Erie Canal from junction to Albany.....	7	265
Albany to New York.....	146	411

### ST. OURS LOCK AND DAM.

Length.....	$\frac{1}{2}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise or lockage.....	5 feet.
Depth of water on sills.....	7 "
Length of dam in western channel.....	690 "

At St. Ours, 14 miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours lock is in the eastern channel.

There is a navigable depth in the Richelieu of 7 feet between St. Ours lock and Chambly basin, a distance of 82 miles.

### CHAMBLY CANAL.

Length of canal.....	12 miles.
Number of locks.....	9
Dimensions of locks—	
Guard lock No. 1 at St. Johns.....	122 feet
Lift lock No. 2.....	124 "
Lift locks Nos. 3, 4, 5, 6.....	118 "
Lift locks Nos. 7, 8, 9, combined.....	125 "
Total rise or lockage.....	74 "
Depth of water on sills.....	6 $\frac{1}{2}$ "
Breadth of canal at bottom.....	36 "
Breadth of canal at surface of water.....	60 "

} From 22 $\frac{1}{2}$   
to 24 feet  
wide.

This canal succeeds the 32 miles of navigable water between St. Ours lock and Chambly basin. The canal overcomes the rapids between Chambly and St. Johns.

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## TRENT CANAL.

The term 'Trent canal' is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in the present condition, are efficient only for local use. By various works this local use has been extended, and by others, now in progress and contemplation, this will become a through route between Lake Ontario and Lake Huron.

The series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the River Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course, as originally contemplated and modified, is as follows:—

Through the River Trent, Rice lake, the River Otonabee and Lakes Clear, Stony, Lovesick, Deer, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 155 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe. The route from Lake Simcoe to Georgian bay, Lake Huron has not yet been determined.

The full execution of the scheme, commenced by the imperial government in 1837, was deferred. By certain works, however, below specified, sections of these waters have been made practicable for navigation, and the whole scheme is now being carried out. A branch of the main route, extending from Sturgeon lake south, affords communication with the town of Lindsay, and, through Lake Scugog, to Port Perry, a distance of approximately 174 miles from Trenton.

The works by which the Trent navigation has been improved to date comprise short canals with locks at Hastings, Peterborough, Peterborough to Lakefield 7 locks, one being a hydraulic lift; Young's Point, Burleigh Falls, Lovesick, Buckhorn, Bobcaygeon, Fenelon Falls, Rosedale, and six locks between Balsam and Simcoe lakes, one being a hydraulic lift; also lock and dam at Lindsay.

Also dams at Healey Falls, Hastings, Peterborough, Peterborough to Lakefield, 6; Young's Point, Burleigh, Lovesick, Buckhorn, Bobcaygeon, Fenelon Falls, Rosedale, and three between Balsam and Simcoe lakes.

Bridges also have been built at many of the locks and at other places.

For convenience the canal may be divided into the following divisions, the lengths being given:—

## ONTARIO-RICE LAKE DIVISION.

Embracing the canal and river navigation between Trenton, on the Bay of Quinté, to Rice lake, 56 miles.

The all-river route from Trenton, on the Bay of Quinté, to Rice lake was fully decided upon by the government during the session of 1907, and the work of construction was begun that fall. The improvement is carried out on the principle of damming the river at suitable points by means of dams, and connecting the pools thus created by means of locks and short stretches of canal. The locks on this division will be 175 feet long, 33 feet wide, with 8 feet 4 inches of water on the sills. In the reaches there will be a minimum depth of 9 feet of water. For the purpose of construction, this division of 56 miles has been divided into seven sections, all of which are under contract. Rice lake is 369 feet above low water level of Lake Ontario, which height will be overcome by 18 locks.

## PETERBOROUGH-RICE LAKE DIVISION.

Embracing that stretch of river and lake navigation from the lower end of Rice Lake to Peterborough, 32 miles.

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This division is navigable with a minimum depth of 6 feet.

At Hastings are a concrete lock, replacing the old masonry lock, and a concrete dam, replacing the old timber structure which formerly existed at that point; these maintain navigation on the Trent River, Rice Lake and the Otonabee River to Peterborough, a distance of about 38 miles.

At Peterborough, 89 miles from Trenton, is a masonry lock and a concrete dam which maintain navigation through Little lake to lock No. 6 of the Peterborough-Lakefield division, a distance of about three-quarters of a mile.

## PETERBOROUGH-LAKEFIELD DIVISION.

Embracing that stretch of river and canal navigation from Little lake at Peterborough to Lakefield, 10 miles.

Construction completed and canal in operation with a minimum depth of 6 feet for navigation.

From Peterborough to Lakefield, navigation is maintained on the Otonabee river by a series of concrete locks and timber dams as follows:—

Leaving Little lake through lock No. 6, in a distance of about half a mile, the hydraulic lift lock is reached, where there is a lift of 65 feet into a reach which extends to lock No. 5, about five miles from Peterborough, the last mile only of this reach being in the river; from here to Lakefield, locks 5, 4, 3, 2 and 1, with their respective dams, give navigation to Lakefield, about ten miles from Peterborough, or 99 from Trenton, and thence on five miles further to Young's Point.

## KAWARTHA LAKES DIVISION.

Embraces that stretch of lake and river navigation from Lakefield to the entrance to the canal on the west shore of Balsam lake—62 miles.

Navigable with a minimum depth of 6 feet. Also in this division, may be included the Lindsay branch which embraces the Scugog lake and river from main channel on Sturgeon lake to Port Perry, the distance being about 30 miles, not included in the total 62 miles, above mentioned. A new lock and dam at Lindsay on this branch has recently been built.

At Young's Point, a masonry lock and timber dam maintain navigation through Clear and Stony lakes to Burleigh, a distance of about nine miles.

At Burleigh, a masonry lock of two lifts and concrete dam maintain navigation through Lovesick lake, about two miles, to Lovesick. A new concrete dam has recently been completed at Burleigh.

At Lovesick, a masonry lock and timber dam maintain navigation through Deer bay for about five miles to Buckhorn.

At Buckhorn, a masonry lock and new concrete dam maintain navigation for about 16½ miles through Buckhorn and Pigeon lakes to Bobcaygeon, 136 miles from Trenton, and also, as branches, maintain navigation from Buckhorn lake through Chemong lake to Bridgeworth, about 8 miles, and in the Pigeon river from Pigeon lake to Omemee, about 10 miles.

At Bobcaygeon, a masonry lock and two dams, one being recently rebuilt of concrete and the other a timber one, maintain navigation through Sturgeon lake and Fenelon river, a distance of about 14½ miles to Fenelon Falls.

At Fenelon Falls is a short canal, a masonry lock of two lifts and a timber dam which maintain navigation across Cameron lakes to Rosedale, a distance of about 3½ miles, to a new concrete lock of the same dimensions as those of the Ontario-Rice lake division.

At Rosedale, the new concrete lock and dam maintain navigation on Balsam lake, the summit level of the canal, which extends from Rosedale to the hydraulic

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lock at Kirkfield, a distance of twelve miles; half of this distance is through a canal connecting Balsam lake with the lock, which is about 166 miles from Trenton.

## SIMCOE-BALSAM LAKE DIVISION.

Extends from Balsam lake to Gamebridge on Lake Simcoe—18.2 miles.

Construction completed and canal in operation with a minimum depth of 6 feet.

At the Kirkfield hydraulic lock is a drop of 50.44 feet from the summit level. From this point to Gamebridge on Lake Simcoe, 179 miles from Trenton, the route consists of canal and river reaches maintained by damming the Talbot river. There are five new concrete locks numbered 1, 2, 3, 4 and 5, with concrete dams at Nos. 1, 2 and 3.

## HOLLAND RIVER DIVISION.

This contemplated the canalization of the Holland river between Lake Simcoe and Newmarket, 12.3 miles. It has not been completed, and work on it was discontinued in December, 1911.

The following is a list of locks now in use, with their dimensions, in order of location, from Hastings to Gamebridge on Lake Simcoe.

	Length between Hollow Quoins	Width.	Depth on Sill.	Lift.
	Ft.	Ft.	Ft.	Ft.
1 Lock at Hastings.....	175	33	8 4 in.	9
1 " at Peterborough.....	134	33	6	9
1 " No. 6, Peterborough—Lakefield Division.....	142	33	6	12
1 " at Peterborough, hydraulic lift lock No. 1.....	140	33	6	65
1 " No. 5, Peterborough—Lakefield Division.....	142	33	6	14
1 " No. 4, " " " ".....	142	33	6	12
1 " No. 3, " " " ".....	142	33	6	12
1 " No. 2, " " " ".....	142	33	6	10
1 " No. 1, " " " ".....	142	33	6	16
1 " at Young's Point.....	134	33	6	6
2 " at Burleigh, each 11½ feet.....	{ Upper 134 Lower 150 }	33	6	23
1 " at Lovesick.....	134	33	6	4
1 " at Buckhorn.....	134	33	6	9
1 " at Bobcaygeon.....	134	33	6	7
2 " at Fenelon Falls, each 12 feet.....	{ Upper 134 Lower 150 }	33	6	24
1 " at Rosedale.....	175	33	8 4 in.	4
1 " at Kirkfield, hydraulic lift No. 2.....	240	33	6	50.44
1 " No. 1, Simcoe—Balsam Lake Division.....	142	33	6	21
1 " No. 2, " " " ".....	142	33	6	14
1 " No. 3, " " " ".....	142	33	6	14
1 " No. 4, " " " ".....	142	33	6	14
1 " No. 5, " " " ".....	142	33	6	11
24				
1 " at Lindsay, Seugog Branch.....	142	33	6	6.5

## ST. PETER'S CANAL, CAPE BRETON.

Length of canal. . . . .	About 2,600 feet.
Breadth at water line. . . . .	55 feet.
Lock. . . . .	1 tidal lock, 4 pairs of gates.
Dimensions. . . . .	200 feet by 48 feet.
Depth of water on sills. . . . .	18 feet at lowest water.
Depth through canal. . . . .	19 feet.
Extreme rise and fall of tide in St. Peter's bay. . . . .	7 feet.

This canal connects St. Peter's bay on the southern side of Cape Breton, Nova Scotia, with the Bras d'Or lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic. A new Atlantic entrance and lock, 300 feet by 48 feet, are now under construction. These will replace the existing lock and entrance.

## PART VIII

# MISCELLANEOUS STATEMENTS

Table of distances, Intercolonial and Prince Edward Island Railways.

### INTERCOLONIAL RAILWAY.

Expenses, gross earnings, freight tonnage, profit or loss, and passengers yearly since July 1, 1876.  
Earnings, passenger, freight, mails and sundries yearly since July 1, 1876.  
Earnings, yearly since July 1, 1876.  
Local and through freight, yearly since July 1, 1876.  
Local and through passengers, yearly since July 1, 1876.  
Coal carried from Nova Scotia collieries, yearly since July 1, 1876.  
Grain carried for shipment, yearly since July 1, 1876.  
Flour and meal carried, yearly since July 1, 1876.  
Grain carried, yearly since July 1, 1876.  
Lumber carried, yearly since July 1, 1876.  
Live stock carried, yearly since July 1, 1876.  
Raw and refined sugar carried, yearly since July 1, 1876.  
Fresh and salt fish carried, yearly since July 1, 1876.  
Ocean-borne goods carried, yearly since July 1, 1876.

### WINDSOR BRANCH.

Earnings, expenses and profits or losses, yearly from 1880.

### PRINCE EDWARD ISLAND RAILWAY.

Expenses, earnings, freight and passenger traffic and loss, yearly from 1875.

### CANALS.

Statement showing total cost of construction and enlargement from Montreal to Port Arthur.  
Statement showing total cost of construction and enlargement from Lachine to Ottawa.  
Statement showing total cost of construction and enlargement from Ottawa to Kingston.  
Statement showing total cost of construction and enlargement from St. Johns to Sorel.  
Statement showing total cost of construction and enlargement from Lake Ontario to Georgian Bay.  
Statement showing total cost of construction and enlargement from Atlantic Ocean to Bras d'Or Lakes.  
Freight traffic in 1911 and 1912.  
Dates of opening and closing of canals for the season of 1912.



# INTERCOLONIAL RAILWAY.

The Intercolonial railway touches six Atlantic ocean ports, namely Pointe du Chêne, Pictou, Halifax, St. John, Sydney and North Sydney, as well as the River St. Lawrence ports of Lévis, opposite Quebec, and Montreal.

The total length of the road operated during the year ended March 31, 1913, was 1,467.73 miles.

The following are the through distances:—

	Miles.
Montreal to Halifax, via Lévis. . . . .	827
“ St. John, via Lévis. . . . .	740
“ Sydney, via Lévis. . . . .	990
“ North Sydney, via Lévis. . . . .	983

Freight is carried direct via St. Henri, which would reduce each of the above distances by 3 miles.

## MAIN LINE AND BRANCHES.

	Miles.
Halifax to Truro. . . . .	61.87
Dartmouth Branch. . . . .	12.00
Truro to Moncton. . . . .	123.77
Moncton to St. John. . . . .	89.31
Pointe du Chêne Branch. . . . .	11.98
Moncton to Campbellton. . . . .	185.37
Campbellton to Ste. Flavie. . . . .	105.03
Indiantown Branch. . . . .	21.95
Ste. Flavie to Rivière du Loup. . . . .	83.29
Rivière Ouelle Branch. . . . .	6.19
Rivière du Loup to Pointe Lévis. . . . .	115.55
Hadlow to Chaudière Curve. . . . .	5.63
Chaudière to Ste. Rosalie. . . . .	115.53
St. Charles Junction to Chaudière Junction. . . . .	16.73
Nicolet Branch. . . . .	14.70
Dalhousie Branch. . . . .	6.28
Pictou to Oxford Junction. . . . .	69.39
Brown's Point to Stellarton. . . . .	11.90
Junction near New Glasgow to Pictou Landing. . . . .	8.18
Pugwash Junction to Pugwash. . . . .	4.54
Truro to Mulgrave. . . . .	122.30
Mulgrave to Point Tupper (Ferry). . . . .	0.80
Point Tupper to Sydney. . . . .	91.17
North Sydney Junction to Sydney Mines. . . . .	7.07
Fredericton to Loggieville. . . . .	124.37
Feron Junction to Sunny Brae. . . . .	12.52
	<hr/>
	1,427.43

## LEASED.

Length of main line from Pointe Lévis to Harlow. . . . .	1.48
Chaudière Curve to Chaudière. . . . .	1.19
Ste. Rosalie Junction to Montreal. . . . .	37.63
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Total miles. . . . . 1,467.73

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## FREIGHT BRANCHES OWNED.

	Miles.
Switch near North street to D.W.T., Halifax. . . . .	0.85
Halifax Cotton Factory. . . . .	2.10
Dartmouth Station to end of line. . . . .	2.12
Sydney Station to wharf. . . . .	1.06
North Sydney Station to wharf. . . . .	0.82
Switch near Pictou landing to coal wharf. . . . .	0.75
Pictou Station to wharf. . . . .	0.15
Pictou Station to Copper Crown smelter. . . . .	0.72
Logan's Tannery siding. . . . .	0.48
Pugwash Station to wharf. . . . .	0.07
Sackville Wharf branch. . . . .	0.47
Dorchester Wharf Branch. . . . .	1.00
Moncton Wharf branch. . . . .	1.00
Courtenay Bay branch. . . . .	2.39
St. John water front extension. . . . .	0.44
St. John Station to Deep Water wharf. . . . .	0.28
Newcastle Wharf Branch. . . . .	1.75
Dalhousie Station to wharf. . . . .	0.50
Campbellton Wharf branch. . . . .	0.43
Rimouski Wharf Branch. . . . .	2.00
Trois Pistoles Spur. . . . .	2.38
Rivière du Loup Wharf Branch. . . . .	4.35
St. Pacôme Spur. . . . .	1.27
Nicolet Station to wharf. . . . .	2.08
Carmel Branch, main line to village. . . . .	1.05
Fort Lawrence Spur. . . . .	1.18
Wallace Spur. . . . .	2.00
Petit Rocher Spur to wharf. . . . .	1.35
	<hr/>
	35.04

## WINDSOR BRANCH.

This road extends from Windsor Junction, on the Intercolonial railway, to Windsor, N.S., a distance of 32 miles.

## PRINCE EDWARD ISLAND RAILWAY.

LENGTH OF LINE.	Miles.
Souris to Tignish. . . . .	166
Mount Stewart to Georgetown. . . . .	24
Charlottetown to Royalty Junction. . . . .	5
Emerald Junction to Cape Traverse. . . . .	13
Alberton to Cascumpec wharf. . . . .	1
Charlottetown to Murray Harbour. . . . .	52.3
Montague Junction to Montague. . . . .	6.2
Harmony to Elmira. . . . .	9.9
	<hr/>
	277.4

## SESSIONAL PAPER No. 20

## INTERCOLONIAL RAILWAY.

THE following table shows the working expenses, gross earnings, the tonnage of freight and number of passengers carried each year from July 1, 1876, to March 31, 1913.

Year.	Average miles in Operation.	Working Expenses.	Gross Earnings.	Profit.	Loss.	Tons of Freight Carried.	No. of Passengers Carried.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.		
1876-77 ...	714	1,661,673 55	1,154,445 33	.....	507,228 22	421,327	613,420
1877-78 ...	714	1,816,273 56	1,378,546 78	.....	432,326 78	552,710	618,957
1878-79 ...	714	2,010,183 22	1,294,009 69	.....	716,083 53	510,861	640,101
1879-80 ...	829	1,603,439 71	1,506,298 48	.....	97,131 23	561,924	581,483
1880-81 ...	840	1,759,851 27	1,760,393 92	542 65	.....	725,777	631,245
1881-82 ...	840	2,069,657 45	2,079,262 66	9,605 18	.....	838,956	779,994
1882-83 ...	840	2,360,373 27	2,370,910 10	17,547 18	.....	970,961	878,600
1883-84 ...	887	2,377,433 62	2,384,414 92	6,981 30	.....	1,009,237	944,636
1884-85 ...	941	2,519,751 56	2,441,203 66	.....	78,547 90	989,986	957,228
1885-86 ...	946	2,583,909 67	2,450,093 88	.....	133,905 79	1,023,788	932,880
1886-87 ...	977	2,922,369 62	2,660,116 93	.....	262,252 69	1,143,020	942,784
1887-88 ...	971	3,366,781 74	2,983,336 05	.....	383,445 69	1,288,823	1,040,163
1888-89 ...	971	3,244,647 73	2,967,801 00	.....	276,847 73	1,218,877	1,136,272
1889-90 ...	971	3,560,575 74	3,012,739 87	.....	847,835 87	1,368,819	1,219,233
1890-91 ...	1,094	3,662,341 94	2,977,395 38	.....	684,946 56	1,304,534	1,298,304
1891-92 ...	1,142	3,439,377 00	2,945,441 97	.....	493,935 03	1,264,575	1,297,732
1892-93 ...	1,142	3,045,317 50	3,065,499 09	20,181 59	.....	1,338,080	1,292,878
1893-94 ...	1,142	2,981,671 98	2,987,516 17	5,838 29	.....	1,342,710	1,301,062
1894-95 ...	1,142	2,936,902 74	2,940,717 95	3,815 21	.....	1,276,816	1,352,664
1895-96 ...	1,142	3,012,827 62	2,957,670 10	.....	55,187 52	1,379,618	1,471,866
1896-97 ...	1,145	2,925,968 67	2,866,028 02	.....	59,940 65	1,296,028	1,501,690
1897-98 ...	1,201	3,327,648 51	3,117,669 85	.....	209,978 66	1,434,576	1,523,444
1898-99 ...	1,301	3,675,686 21	3,738,331 44	62,645 43	.....	1,750,761	1,603,095
1899-1900 ...	1,301	4,431,404 69	4,552,071 71	120,667 02	.....	2,151,208	1,029,754
1900-01 ...	1,301	5,460,404 64	4,972,235 87	.....	488,166 77	2,111,310	2,517,295
1901-02 ...	1,301	5,574,563 30	5,671,385 91	96,822 61	.....	2,385,816	2,186,226
1902-03 ...	1,315	6,196,653 19	6,324,323 72	127,670 53	.....	2,790,737	2,404,230
1903-04 ...	1,321	7,239,982 04	6,339,231 43	.....	900,750 61	2,664 149	2,663,156
1904-05 ...	1,446	8,508,826 75	6,783,522 81	.....	1,725,303 92	2,782,257	2,810,960
1905-06 ...	1,446	7,881,914 36	7,643,829 90	61,915 54	.....	3,156,189	2,737,160
1906-07 ...	1,448	6,030,171 83	6,248,311 00	218,139 17	.....	2,606,073	2,044,847
1907-08 ...	1,448	9,157,435 53	9,173,558 80	16,123 27	.....	4,134,064	2,789,371
1908-09 ...	*1,447-13	9,328,021 55	8,527,069 46	.....	800,952 09	3,573,972	2,907,232
1909-10 ...	1,447-13	8,645,070 33	9,268,234 99	623,164 66	.....	3,927,240	3,122,347
1910-11 ...	1,455-63	9,595,976 79	9,863,783 40	267,806 61	.....	4,101,400	3,232,895
1911-12 ...	1,468-15	10,591,035 84	10,593,785 84	2,750 00	.....	4,536,599	3,416,553
1912-13 ...	1,467-73	11,984,482 69	11,984,482 69	.....	.....	5,203,469	3,763,115

+ The year 1906-7 was nine months only; the Canadian fiscal year having been changed to close on March 31, instead of June 30.

\* The railway was re-measured in this year.

† Of this total \$4,500 was paid for compassionate allowances by special vote of Parliament.

4 GEORGE V., A. 1914

## INTERCOLONIAL RAILWAY.

STATEMENT of Earnings, yearly, from July 1, 1876, to March 31, 1913.

Year.	Miles in Operation.	Passenger Traffic.	Freight Traffic.		Mails and Sundries.		Total.		
			\$	cts.	\$	cts.	\$	cts.	\$
1876-7	714	460,368	15	607,564	99	86,512	21	1,154,443	33
1877-8	714	475,256	82	801,709	82	101,985	07	1,378,946	78
1878-9	714	451,893	29	752,490	85	88,715	55	1,294,009	69
1879-80	829	490,338	66	915,486	50	100,473	32	1,506,298	48
1880-1	840	545,114	48	1,113,872	21	101,407	23	1,760,493	92
1881-2	840	651,299	74	1,303,496	00	124,470	72	2,079,262	66
1882-3	840	741,992	72	1,487,601	98	141,326	40	2,379,910	10
1883-4	887	775,784	77	1,461,390	37	147,240	78	2,383,414	92
1884-5	941	747,285	13	1,542,052	10	151,566	35	2,441,203	66
1885-6	946	765,900	03	1,523,487	72	160,706	13	2,450,093	88
1886-7	977	828,328	28	1,677,971	59	153,817	06	2,660,116	93
1887-8	971	844,448	07	1,932,877	85	166,010	13	2,983,336	95
1888-9	971	906,246	77	1,909,094	44	152,460	09	2,967,801	00
1889-90	971	895,094	53	1,964,646	86	152,998	48	3,012,739	87
1890-1	1,094	962,316	88	1,853,629	88	160,448	62	2,977,395	38
1891-2	1,142	961,427	94	1,803,529	03	180,485	00	2,946,441	97
1892-3	1,142	1,002,912	74	1,868,853	84	184,468	80	3,065,499	09
1893-4	1,142	958,915	13	1,834,126	34	193,762	51	2,987,502	27
1894-5	1,142	963,914	44	1,782,608	54	194,194	97	2,940,717	95
1895-6	1,142	971,426	26	1,788,813	18	197,400	66	2,957,640	10
1896-7	1,145	979,005	57	1,687,050	42	190,472	03	2,866,028	02
1897-8	1,201	1,053,864	64	1,857,740	06	206,065	15	3,117,669	85
1898-9	1,315	1,167,453	16	2,348,096	58	222,781	70	3,738,331	41
1899-1900	1,315	1,404,469	87	2,912,790	52	234,811	32	4,552,071	91
1900-1	1,315	1,607,166	79	3,121,006	15	244,062	93	4,972,235	87
1901-2	1,315	1,770,941	13	3,644,513	42	255,931	36	5,761,385	91
1902-3	1,315	1,927,916	87	4,128,255	00	268,151	75	6,324,323	72
1903-4	1,321	2,021,568	40	4,041,122	48	276,540	55	6,339,231	43
1904-5	1,446	2,105,066	75	4,373,178	75	305,277	53	6,783,522	33
1905-6	1,446	2,297,716	52	5,019,805	53	326,307	85	7,643,829	90
1906-7	1,448	1,952,438	88	4,032,745	00	263,127	12	6,248,311	05
1907-8	1,448	2,711,416	98	6,054,493	45	407,643	37	9,173,358	80
1908-9	1,147 13	2,628,218	57	5,502,550	58	396,300	31	8,527,069	46
1909-10	1,447 13	2,765,884	66	6,048,884	18	453,466	15	9,268,234	99
1910-11	1,455 63	2,890,419	82	6,344,595	66	619,767	92	9,863,783	40
1911-12	1,468 15	3,017,304	63	7,008,300	49	568,180	72	10,593,785	84
1912-13	1,467 73	3,438,447	32	8,028,760	13	517,275	24	11,984,482	69

\* As measured in this year. † 1906-7, nine months only.

SESSIONAL PAPER No. 20

## INTERCOLONIAL RAILWAY.

STATEMENT showing the Number of Tons of Local and Through Freight carried, yearly, from July 1, 1876, to March 31, 1913.

Year.	Miles in Operation.	Local Freight.	Through Freight.	Total.
1876-7	714	The information for these years was destroyed when the general offices in Moncton were burned		421,327
1877-8	714			522,710
1878-9	714			510,861
1879-80	829			561,924
1880-1	840			725,777
1881-2	840	571,784	267,272	838,956
1882-3	840	537,025	443,936	970,961
1883-4	887	584,581	424,658	1,009,237
1884-5	941	506,574	483,352	989,926
1885-6	946	580,076	443,712	1,023,788
1886-7	977	633,455	509,565	1,143,020
1887-8	971	727,599	561,224	1,288,823
1888-9	971	624,436	594,441	1,218,877
1889-90	971	756,696	612,123	1,368,819
1890-1	1,094	797,492	507,042	1,304,534
1891-2	1,142	750,783	513,792	1,264,575
1892-3	1,142	1,030,628	357,452	1,388,080
1893-4	1,142	966,114	376,596	1,342,710
1894-5	1,142	901,374	366,442	1,267,816
1895-6	1,142	1,101,229	368,389	1,379,618
1896-7	1,145	927,167	368,859	1,296,028
1897-8	1,201	1,053,569	381,007	1,434,576
1898-9	1,315	1,351,569	399,192	1,750,761
1899-1900	1,315	1,713,928	437,280	2,151,208
1900-1	1,315	1,633,671	477,639	2,111,310
1901-2	1,315	1,914,551	471,265	2,385,816
1902-3	1,315	2,239,993	550,744	2,790,737
1903-4	1,321	2,123,261	540,888	2,664,149
1904-5	1,446	2,119,528	662,729	2,782,257
1905-6	1,446	2,413,863	742,326	3,156,189
1906-7	1,448	1,996,869	669,204	2,666,073
1907-8	1,448	3,227,425	906,629	4,134,054
1908-9	†1,447 13	2,742,454	831,518	3,573,972
1909-10	1,447 13	2,958,642	968,598	3,927,240
1910-11	1,455.63	3,085,487	1,015,963	4,101,400
1911-12	1,468.15	3,452,489	1,084,110	4,536,599
1912-13	1,467.73	3,913,373	1,290,066	5,203,469

\* 1906-7, nine months only.

† As remeasured in this year.

## INTERCOLONIAL RAILWAY.

STATEMENT of the Number of Local and Through Passengers carried, yearly, from July 1, 1876, to March 31, 1913.

Year.	Miles in Operation.	Number of Local Passengers.	Number of Through Passengers.	Total.
1876-7.	714	The information for these years was destroyed when the general offices in Moncton were burned		613,420
1877-8.	714			619,957
1878-9.	714			640,101
1879-80.	829			581,483
1880-1.	840			631,245
1881-2.	840	647,534	132,460	779,994
1882-3.	840	728,186	150,414	878,600
1883-4.	887	784,715	159,921	944,636
1884-5.	941	812,028	145,200	957,228
1885-6.	946	784,817	148,063	932,880
1886-7.	977	814,632	128,752	942,784
1887-8.	971	948,324	91,839	1,040,163
1888-9.	971	1,050,592	85,680	1,136,272
1890-90.	971	1,112,695	91,531	1,219,233
1890-1.	1,094	1,203,814	94,490	1,298,304
1891-2.	1,142	1,198,649	99,083	1,297,732
1892-3.	1,142	1,188,827	104,051	1,292,878
1893-4.	1,142	1,216,027	85,035	1,301,062
1894-5.	1,142	1,272,284	80,383	1,352,667
1895-6.	1,142	1,386,803	85,063	1,471,866
1896-7.	1,145	1,416,631	85,059	1,501,690
1897-8.	1,201	1,438,590	89,854	1,523,444
1898-9.	1,315	1,504,652	98,443	1,603,095
1899-1900.	1,315	1,878,858	112,896	1,791,754
1900-1.	1,315	1,905,599	119,696	2,025,295
1901-2.	1,315	2,061,196	125,030	2,186,226
1902-3.	1,315	2,555,013	149,217	2,404,230
1903-4.	1,321	2,447,843	215,313	2,663,156
1904-5.	1,446	2,589,928	221,032	2,810,960
1905-6.	1,446	2,491,472	245,688	2,737,160
*1906-7.	1,448	1,853,126	191,721	2,044,846
1907-8.	1,448	2,593,886	195,485	2,789,371
1908-9.	+1,447-13	2,656,217	251,020	2,907,237
1909-10.	1,447-13	2,873,547	248,777	3,122,324
1910-11.	1,455-63	2,968,435	264,460	3,232,895
1911-12.	1,468-15	3,126,922	289,631	3,416,553
1912-13.	1,467-73	3,448,411	314,704	3,763,115

\* 1906-7, nine months only.      † As remeasured in this year.

## SESSIONAL PAPER No. 20

The following table shows the number of Tons of Coal carried over the Inter-colonial railway from the Nova Scotia collieries to Ste. Rosalie, Montreal and St. John for points west thereof, and to local stations in each year since July 1, 1876.

Year.	For the West.			To Local Stations.	Total.
	Via Ste. Rosalie.	Via Montreal.	Via St. John.		
1876-7				103,420	103,420
1877-8				97,043	97,043
1878-9		300		112,232	112,532
1879-80		1,097		135,369	136,466
1880-1		6,102	4,022	174,483	184,607
1881-2		18,015	11,779	218,364	248,158
1882-3		12,837	22,206	227,380	262,423
1883-4		32,014	19,532	252,014	293,562
1884-5		133,440	1,773	213,791	349,004
1885-6		171,170	21,150	215,272	407,592
1886-7		192,871	27,536	233,178	453,585
1887-8		183,704	36,228	309,727	529,659
1888-9		160,026	27,023	338,538	526,487
1889-90		164,153	25,126	366,967	554,546
1890-1		113,996	60,213	344,829	498,038
1891-2		35,447	5,918	392,441	433,806
1892-3		136,808	3,775	402,653	543,296
1893-4		102,273	8,028	367,390	478,691
1894-5		67,082	7,865	310,253	385,200
1895-6		53,124	9,681	369,708	432,513
1896-7		38,395	12,305	331,469	382,172
1897-8		9,084	9,796	351,069	369,949
1898-9		4,647	5,399	484,163	494,206
1899-1900		3,495		599,714	603,289
1900-1		136			506,454
1901-2		1,131	5,763	3,640	546,986
1902-3	2,260	7,817	6,775	725,727	742,519
1903-4	2,260	637	513	691,346	694,761
1904-5	800	265	5,022	596,290	602,377
1905-6	7,542	1,625	661	610,444	620,272
*1906-7	1,737	2,808	3,252	624,833	632,630
1907-8	22	183	4,245	1,061,694	1,066,134
1908-9	514	945	4,243	909,050	914,752
1909-10	42	890	1,452	1,003,120	1,005,504
1910-11	90	180	633	983,921	984,824
1911-12	73		303	1,111,157	1,111,533
1912-13			425	1,216,636	1,217,061

\* 1906-7, nine months only.

4 GEORGE V., A. 1914

TABLE showing the number of Bushels of Grain carried during each year over the Intercolonial railway for shipment since July 1, 1876.

Year.	Bushels.		Total.	Year.	Bushels.		Total.
	Via Chaudière.	Via St. John.			Via Chaudière.	Via St. John.	
1876-7.....				1895-6.....	Nil.	Nil.	Nil.
1877-8.....				1896-7.....	"	"	"
1878-9.....				1897-8.....	8,000	"	8,000
1879-80.....				1898-9.....	30,000	"	30,000
1880-1.....				1899-1900.....	13,239	"	13,239
1881-2.....				1900-1.....	147	"	147
1882-3.....	31,011		31,011	1901-2.....	Nil.	"	Nil.
1883-4.....	73,389		73,389	1902-3.....	"	"	"
1884-5.....	300,901		300,901	1903-4.....	147,438	"	147,438
1885-6.....	389,122		389,122	1904-5.....	Nil.	"	Neant.
1886-7.....	575,880		575,880	1905-6.....	170,000		170,000
1887-8.....	69,021		69,021	1906-7.....			Nil.
1888-9.....	129,725		129,725	1907-8.....			"
1889-90.....	502,012		502,012	1908-9.....			"
1890-1.....	148,803	59,543	218,337	1909-10.....			"
1891-2.....	845,997	519,500	1,265,497	1910-11.....	*233,839	2,000	235,839
1892-3.....	156,306	197,666	352,975	1911-12.....	1122,734	1,215,574	1,338,308
1893-4.....	Nil.	8,026	8,026	1912-13.....	2,021,901		2,021,901
1894-5.....	"	Nil.	Nil.				

\* Via Montreal. 1906-7, nine months only. † Via Halifax.

TABLE showing the number of Barrels of Flour and Meal carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Barrels.	Year.	Barrels.
1876-7.....	254,710	1895-6.....	822,097
1877-8.....	557,772	1896-7.....	847,701
1878-9.....	630,329	1897-8.....	987,701
1879-80.....	535,248	1898-9.....	1,157,250
1880-1.....	672,310	1899-1900.....	1,234,077
1881-2.....	692,095	1900-1.....	1,292,106
1882-3.....	983,916	1901-2.....	1,311,707
1883-4.....	817,134	1902-3.....	1,521,540
1884-5.....	935,977	1903-4.....	1,607,050
1885-6.....	761,127	1904-5.....	1,769,480
1886-7.....	763,894	1905-6.....	1,882,630
1887-8.....	871,838	1906-7.....	1,531,140
1888-9.....	948,514	1907-8.....	1,528,620
1889-90.....	1,116,050	1908-9.....	1,466,920
1890-1.....	1,013,129	1909-10.....	1,608,170
1891-2.....	954,015	1910-11.....	1,696,280
1892-3.....	856,913	1911-12.....	1,873,640
1893-4.....	944,967	1912-13.....	2,094,990
1894-5.....	938,351		

1906-7, nine months only.





## SESSIONAL PAPER No. 20

TABLE showing the number of Bushels of Grain carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Bushels.	Year.	Bushels.
1876-77.....	292,852	1895-96.....	1,064,385
1877-78.....	331,170	1896-97.....	1,093,499
1878-79.....	302,921	1897-98.....	1,551,372
1879-80.....	534,021	1898-99.....	2,595,353
1880-81.....	565,678	1899-1900.....	2,720,453
1881-82.....	560,253	1900-01.....	3,535,364
1882-83.....	1,195,601	1901-02.....	2,959,761
1883-84.....	654,673	1902-03.....	3,392,252
1884-85.....	734,902	1903-04.....	2,788,772
1885-86.....	849,800	1904-05.....	3,317,910
1886-87.....	1,018,395	1905-06.....	2,924,226
1887-88.....	1,219,035	1906-07.....	2,231,864
1888-89.....	1,256,158	1907-08.....	4,567,245
1889-90.....	2,610,202	1908-09.....	4,727,268
1890-91.....	2,890,921	1909-10.....	7,074,042
1891-92.....	3,776,677	1910-11.....	5,080,848
1892-93.....	1,514,619	1911-12.....	5,206,440
1893-94.....	1,304,684	1912-13.....	6,530,920
1894-95.....	1,036,384		

1906-7, nine months only.

TABLE showing the quantity of Lumber in feet carried during each year over the Intercolonial railway since July 1, 1876.

Year.	Feet.	Year.	Feet.
1876-77.....	50,096,474	1895-96.....	226,332,715
1877-78.....	56,626,547	1896-97.....	243,355,725
1878-79.....	55,626,696	1897-98.....	354,093,816
1879-80.....	55,462,654	1898-99.....	306,554,031
1880-81.....	72,841,388	1899-1900.....	379,350,074
1881-82.....	78,356,418	1900-01.....	396,858,964
1882-83.....	104,633,417	1901-02.....	428,051,029
1883-84.....	131,120,948	1902-03.....	459,231,589
1884-85.....	138,493,675	1903-04.....	465,379,803
1885-86.....	117,186,512	1904-05.....	518,434,310
1886-87.....	161,801,763	1905-06.....	572,878,600
1887-88.....	137,755,272	1906-07.....	452,602,703
1888-89.....	199,507,777	1907-08.....	754,759,383
1889-90.....	210,886,071	1908-09.....	571,395,101
1890-91.....	184,188,324	1909-10.....	677,805,611
1891-92.....	175,474,340	1910-11.....	647,327,499
1892-93.....	181,211,013	1911-12.....	656,418,588
1893-94.....	200,507,949	1912-13.....	830,654,000
1894-95.....	202,247,269		

1906-7, nine months only.

4 GEORGE V., A. 1914

TABLE showing the number of Live Stock carried during each year over the Inter-colonial railway since July 1, 1876.

Year.	Number.	Year.	Number.
1876-77. ....	34,414	1895-96. ....	61,051
1877-78. ....	46,498	1896-97. ....	72,082
1878-79. ....	47,584	1897-98. ....	89,301
1879-80. ....	70,990	1898-99. ....	109,821
1880-81. ....	61,574	1899-1900. ....	92,813
1881-82. ....	73,479	1900-01. ....	95,923
1882-83. ....	68,338	1901-02. ....	98,495
1883-84. ....	60,090	1902-03. ....	127,060
1884-85. ....	70,785	1903-04. ....	113,006
1885-86. ....	74,498	1904-05. ....	110,670
1886-87. ....	82,896	1905-06. ....	106,589
1887-88. ....	98,302	1906-07. ....	97,381
1888-89. ....	85,960	1907-08. ....	99,824
1889-90. ....	80,771	1908-09. ....	104,165
1890-91. ....	95,529	1909-10. ....	106,712
1891-92. ....	87,889	1910-11. ....	113,976
1892-93. ....	93,369	1911-12. ....	115,189
1893-94. ....	79,203	1912-13. ....	119,490
1894-95. ....	72,106		

1906-7, nine months.

## SESSIONAL PAPER No. 20

TABLE showing the number of Tons of Ocean-borne goods to and from Europe carried over the Intercolonial railway during each year since July 1, 1876.

Year.	Via Ste. Rosalie and from the West.	Via Mon treal to and from the West.	Via St. John to and from the West.	To and from Local Stations.	Total.
1876-77.....					
1877-78.....		14,949		3,405	18,354
1878-79.....		21,628		2,643	24,271
1879-80.....		21,073		4,952	26,025
1880-81.....		15,454		3,334	18,788
1881-82.....		21,607		4,168	25,775
1882-83.....		24,875		7,911	32,786
1883-84.....		19,696		6,533	26,229
1884-85.....		22,787		8,405	31,192
1885-86.....		13,464		8,216	21,680
1886-87.....		16,923		9,811	26,734
1887-88.....		41,864		8,878	50,742
1888-89.....		17,340		11,481	28,821
1889-90.....		9,895		11,730	21,625
1890-91.....		9,923		10,764	20,687
1891-92.....		9,716		23,835	33,571
1892-93.....		7,295		12,319	19,714
1893-94.....		3,023	204	13,455	16,682
1894-95.....		6,749	213	10,399	17,361
1895-96.....		3,767	314	16,748	20,829
1896-97.....		2,654	263	17,239	20,156
1897-98.....		5,950	1,637	18,633	26,220
1898-99.....		2,462	243	31,555	34,263
1899-1900.....		6,880	307	37,108	39,794
1900-01.....	322	7,780	1,142	155,514	163,838
1901-02.....	1,106	11,925	1,528	172,733	183,147
1902-03.....	817	21,377	1,194	124,695	138,631
1903-04.....	2,079	15,325	2,994	146,070	174,520
1904-05.....	284	17,217	3,683	85,853	105,149
1905-06.....	2,026	15,922	5,337	128,462	153,042
1906-07.....	1,384	16,652	436	110,447	128,219
1907-08.....	2,440	16,652	519	134,541	154,052
1908-09.....	2,487	23,402	649	119,913	146,451
1909-10.....	2,367	21,064	5,818	131,273	160,522
1910-11.....	7,220	27,607	6,927	130,776	172,530
1911-12.....	9,911	63,544	8,777	213,579	295,811
1912-13.....	13,144	74,870	11,114	192,012	291,140

1906-7, nine months.

4 GEORGE V., A. 1914

TABLE showing the number of Tons of Raw and Refined Sugar carried over the Inter-colonial railway during each year since July 1, 1876.

Year.	Raw Sugar.					Refined Sugar.				
	Via Ste. Rosalie.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.	To Ste. Rosalie for the West.	To Montreal for the West.	To St. John for the West.	To Local Stations	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77.....		340			340					
1877-78.....		186			186					
1878-79.....		1,041			1,041					
1879-80.....		12,220			12,220					
1880-81.....		13,872			13,862		4,022		2,902	6,924
1881-82.....		13,256		1,290	15,546		7,146		3,607	10,753
1882-83.....		9,465		508	9,973		11,126		5,497	16,623
1883-84.....		13,778		3,068	16,846		14,543		7,265	21,808
1884-85.....		10,381		3,661	14,042		18,024		8,445	26,469
1885-86.....		4,394		3,988	8,382		7,674		5,858	13,518
1886-87.....		20,450		8,500	28,950		15,044		8,395	23,439
1887-88.....		14,320		14,085	28,405		21,641		7,133	28,774
1888-89.....		24,358		7,160	31,518		12,955		11,120	24,075
1889-90.....		6,390		8,913	16,303		6,778		6,125	12,903
1890-91.....		5,088	4,670	8,215	17,973		10,130	468	5,096	16,594
1891-92.....		7,142	3,960	10,535	21,637		12,633	7,647	12,414	32,721
1892-93.....				10,137	10,137		8,327	6,456	7,840	22,623
1893-94.....				6,775	6,775		17,729	6,967	8,885	33,581
1894-95.....				10,342	10,342		13,351	15,819	4,695	33,865
1895-96.....				9,824	9,824		15,138	13,734	11,309	40,181
1896-97.....				4,925	4,925		5,694	8,069	6,957	20,720
1897-98.....							6,624	8,821	10,989	26,534
1898-99.....							8,138	2,183	15,833	26,164
1899-1900.....		96			96		9,795	257	19,655	29,907
1900-01.....		489			489	403	14,791	12	10,615	25,821
1901-02.....		90		11,553	11,643	3,101	9,831	861	18,839	29,632
1902-03.....		194		17,137	17,331	3,183	5,763	1,636	20,529	31,111
1903-04.....	357	875		7,495	8,727	6,013	8,628	879	29,400	44,920
1904-05.....	602	603	78	1,495	15,684	1,446	7,107	224	23,937	31,764
1905-06.....		715	68	9,308	10,091	4,235	12,268	176	24,780	41,459
1906-07.....		394		14,671	15,065	1,998	5,898	2,374	13,927	24,197
1907-08.....		912		4,371	5,283	5,280	10,555	723	21,073	37,631
1908-09.....	6	1,705		6,817	8,528	5,095	8,906	979	21,527	36,507
1909-10.....	309	2,000		12,203	14,512	6,402	9,217	1,051	23,224	39,894
1910-11.....	532	1,293		24,166	25,991	6,326	9,368	947	25,026	41,667
1911-12.....	1,096	2,558		12,057	15,711	8,242	9,691	1,519	21,870	41,322
1912-13.....	1,380	14,030			15,410	8,678	9,640	1,422	23,684	43,424

1906-7, nine months only.

## SESSIONAL PAPER No. 20

TABLE showing the number of Tons of Fresh and Salt Fish carried over the Inter-colonial railway during each year since 1876.

Year.	Fresh Fish.					Salt Fish.				
	Via Ste. Rosalie.	Via Montrea	Via St. John	To Local Stat ons	Total.	Via Ste. Rosalie.	Via Montreal	Via St. John	To Local Stations	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1876-77.....		530	921	527	1,978	...	551	1,848	802	3,201
1877-78.....		596	1,015	474	2,085	...	898	1,644	805	3,346
1878-79.....		471	1,336	817	2,624	...	988	1,038	1,048	2,974
1879-80.....		519	1,462	453	2,334	...	1,612	2,238	959	4,809
1880-81.....		498	1,579	920	3,297	...	1,418	937	1,051	4,406
1881-82.....		475	1,919	967	3,951	...	4,031	1,066	2,487	7,584
1882-82.....		542	384	393	1,319	...	3,229	759	1,354	5,412
1883-84.....		838	1,682	412	2,932	...	1,322	1,143	1,224	3,689
1884-85.....		1,062	1,885	484	3,431	...	3,563	3,600	1,596	8,759
1885-86.....		1,669	1,655	902	4,216	...	1,680	3,047	3,376	7,103
1886-87.....		1,278	1,572	2,008	4,859	...	3,236	569	1,747	5,552
1887-88.....		1,533	1,477	1,031	4,041	...	2,617	470	1,099	4,193
1888-89.....		2,474	2,000	1,870	63,44	...	3,070	7,746	2,994	13,810
1889-90.....		2,335	1,787	2,111	6,223	...	2,449	847	3,288	6,584
1890-91.....		2,029	2,788	1,848	6,665	...	1,953	1,917	3,236	7,106
1891-92.....		1,367	1,746	547	3,660	...	1,946	928	1,889	4,763
1892-93.....		1,683	1,875	3,340	6,898	...	3,262	1,811	2,176	7,249
1893-94.....		1,959	2,192	2,224	6,375	...	2,921	1,814	2,962	7,697
1894-95.....		2,006	3,726	1,160	6,892	...	2,075	1,849	5,285	10,209
1895-96.....		1,966	3,059	1,316	6,344	...	1,863	1,087	2,791	5,741
1896-97.....		3,307	3,115	1,286	7,708	...	2,158	1,176	2,536	5,889
1897-98.....		3,575	3,703	1,052	8,330	...	1,729	1,066	2,210	5,005
1898-99.....		1,210	2,070	3,305	5,583	...	1,651	1,198	3,625	5,474
1899-1000.....		2,547	2,706	3,686	8,939	...	2,421	1,563	2,658	6,643
1900-01.....	37	2,009	3,207	4,125	9,393	860	3,416	1,346	4,643	9,768
1901-02.....	219	3,013	4,373	5,477	13,082	283	3,250	1,413	5,196	10,042
1902-03.....	149	2,269	3,040	4,842	10,289	493	2,808	1,615	6,579	11,495
1904-05.....	779	1,939	3,588	5,002	11,068	225	2,359	564	5,848	8,996
1905-06.....	284	2,748	2,439	7,706	13,177	683	2,740	346	6,994	10,763
1906-07.....	320	2,882	3,712	7,400	14,314	307	3,159	416	6,348	10,227
1907-08.....	199	3,288	1,353	6,224	11,061	661	2,856	1,976	7,081	12,527
1908-09.....	312	2,965	2,794	6,946	13,017	668	4,078	1,632	4,866	11,244
1909-10.....	547	3,965	2,616	6,525	14,110	697	3,759	806	6,706	14,868
1910-11.....	1,216	4,300	2,733	6,161	14,110	893	3,590	1,993	9,130	15,546
1911-12.....	1,476	4,213	1,917	6,686	14,292	4,250	4,060	425	10,108	18,843
1912-13.....	1,490	4,572	3,928	7,294	17,284	909	5,795	2,902	8,529	18,135

1912-13, nine months only.

## WINDSOR BRANCH.

This road is operated by the Dominion Atlantic Railway Company (formerly the Windsor and Annapolis Railway Company), under a lease which covers also running powers over the Intercolonial railway between Windsor Junction and Halifax. The company retains two-thirds of the gross earnings, and the government receives one-third of the gross earnings, for maintaining the way and works.

Year.	Miles in oper- ation.	One-third gross earnings.	Proportion credited to line Windsor Junction to Halifax.		Proportion credited to the Windsor Branch.		Main- tenance expenses.		Profit.		Loss.	
			\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.	
1880-81	32	28,434 29	7,217	76	21,216	53	20,502	26	714	27		
1881-82	32	28,461 07	7,407	88	21,052	19	13,090	55	7,953	64		
1882-83	32	31,199 77	8,095	88	24,113	89	23,103	93	1,009	96		
1883-84	32	30,428 39	7,409	46	23,018	93	22,140	86	878	97		
1884-85	32	32,246 30	7,794	95	24,451	35	18,751	96	5,699	39		
1885-86	32	31,185 63	7,527	52	23,658	11	19,229	49	4,428	62		
1886-87	32	33,564 58	8,237	00	25,327	58	26,042	33			714	75
1886-87	32	32,242 85	6,689	30	24,553	55	24,040	33	513	22		
1887-88	32	37,313 43	8,941	32	28,372	11	20,856	50	7,515	61		
1889-90	32	39,544 19	9,384	73	30,162	46	18,982	82	11,179	64		
1890-91	32	39,519 56	9,284	48	38,508	35	28,931	71	1,303	42		
1891-92	32	42,391 23	9,382	38	30,235	13	19,514	37	13,994	48		
1892-93	32	43,961 28	9,585	17	34,316	11	16,889	15	17,426	16		
1893-94	32	41,834 70	8,859	23	32,575	47	17,645	09	15,330	38		
1894-95	32	50,703 84	11,626	20	39,077	64	14,640	07	24,437	57		
1895-96	32	47,456 74	10,894	91	36,561	83	16,476	46	20,985	37		
1896-97	32	54,208 81	13,695	58	40,603	23	10,821	04	29,782	19		
1897-98	32	48,892 21	11,665	57	37,226	64	18,181	09	14,045	01		
1898-99	32	56,314 51	13,840	48	42,474	04	12,873	06	29,600	94		
1899-1900	32	62,266 61	14,925	18	47,351	43	12,891	56	34,459	87		
1900-01	32	62,523 20	15,261	31	47,261	89	16,862	66	30,395	23		
1901-02	32	65,315 38	15,710	79	49,604	59	16,376	27	33,228	32		
1902-03	32	56,417 38	13,856	57	42,560	81	17,843	19	24,717	62		
1903-04	32	72,708 54	19,674	49	53,634	05	24,281	09	29,352	96		
1904-05	32	66,798 46	16,759	79	50,038	67	26,863	16	23,175	51		
1905-06	32	65,936 66	16,484	16	49,452	50	17,485	97	31,966	53		
1906-07	32	61,597 30	16,156	78	45,440	52	15,425	32	30,015	20		
1907-08	32	76,471 58	20,041	17	56,430	41	37,912	11	18,518	20		
1908-09	32	75,781 86	19,750	47	56,031	33	36,234	55	19,796	78		
1909-10	32	81,861 73	21,207	75	60,653	98	23,549	90	37,104	08		
1910-11	32	64,781 89	16,590	46	48,191	43	17,797	98	30,393	45		
1911-12	32	99,996 10	26,819	50	73,176	60	33,854	05	39,322	55		
1912-13	32	93,235 40	24,988	70	68,246	70	29,970	62	38,276	08		

1906-7, nine months only.

## SESSIONAL PAPER No. 20

## PRINCE EDWARD ISLAND RAILWAY.

The following table shows the working expenses, the gross and net earnings, the tons of freight and number of persons carried each year since June 30, 1875, when the road was first opened for traffic:—

Year.	Miles in operation.	Working expenses.	Gross earnings.	Loss.	Tons of freight carried.	No. of passengers carried.
		\$ c.	\$ c.	\$ c.		
1875-76	199	214,930 43	118,060 96	96,869 47	28,358	93,964
1887-77	199	228,595 25	130,664 92	97,930 33	41,039	93,478
1877-78	199	221,599 46	135,899 60	85,699 89	38,668	111,428
1878-79	199	223,313 12	125,855 99	97,457 21	38,923	105,046
1879-80	199	164,640 55	113,851 11	50,789 44	37,208	90,533
1880-81	199	228,259 97	137,267 54	90,922 43	48,315	118,436
1881-82	199	252,808 41	146,170 42	106,637 99	51,920	117,162
1882-83	199	236,428 13	144,504 12	91,924 01	51,841	118,988
1883-84	211	211,207 01	158,588 06	52,618 95	57,346	130,423
1884-85	211	216,744 34	155,584 36	61,159 98	57,913	120,374
1885-86	211	204,237 37	155,303 37	48,934 00	63,589	103,067
1886-87	211	229,639 95	158,365 62	71,276 33	59,603	131,246
1887-88	211	247,539 44	171,369 56	76,189 89	55,682	152,780
1888-89	211	266,485 85	160,971 78	105,524 07	52,604	133,099
1889-90	211	257,990 08	174,258 05	83,732 03	59,511	145,508
1890-91	211	289,706 38	157,442 69	132,263 69	51,065	139,389
1891-92	211	226,422 17	162,690 42	63,731 75	56,718	132,111
1893-94	211	226,891 06	158,533 83	68,857 23	53,577	123,727
1894-95	211	232,105 19	149,634 71	83,250 41	48,325	125,089
1895-96	211	225,138 56	146,476 54	78,662 02	46,395	122,586
1896-97	211	240,489 90	153,443 13	87,046 77	52,151	131,498
1897-98	211	231,418 74	158,950 61	72,468 13	57,539	156,510
1898-99	211	218,053 01	165,021 03	53,040 98	57,968	129,667
1899-1900	211	220,931 81	174,738 73	46,193 08	62,227	147,471
1900-01	211	261,766 24	193,833 48	67,883 76	73,696	157,793
1901-02	210	270,159 97	197,999 97	72,160 00	74,381	184,748
1902-03	209	269,737 82	217,714 24	41,923 58	80,582	205,265
1903-04	209	335,695 44	234,390 03	101,305 41	86,286	224,517
1904-05	209	370,464 44	217,330 61	153,133 83	75,969	235,194
1905-06	261	294,253 16	257,270 57	36,982 59	87,162	371,092
1906-07	267	282,148 50	215,534 97	67,713 53	67,144	232,256
1907-08	267	399,947 79	304,579 83	95,367 96	97,250	317,828
1908-09	267 5	400,330 00	311,319 63	69,010 78	106,090	332,758
1909-10	267 5	427,283 73	319,074 74	108,208 99	105,741	251,038
1910-11	267 5	424,104 00	337,419 55	86,684 45	108,263	356,761
1911-12	267 5	449,962 91	367,203 39	82,759 52	120,218	388,076
1912-13	267 5	489,972 34	389,474 07	100,498 27	122,784	433,888

1906-7, nine months only.

4 GEORGE V., A. 1914

## CANALS.

STATEMENT showing the total cost of construction of the individual Dominion canal works and connecting waters, up to March 31, 1913.

*Route from Montreal to Lake Superior.*

—	Original Construction.	Enlargement of Canals.	Improvements to St. Lawrence River and Lakes.	Totals.
	\$ cts.	cts.	\$ cts.	\$ cts.
Lachine Canal.....	2,589,532 85	10,815,438 11		13,404,970 96
Lake St. Louis.....			298,176 11	298,176 11
Soulanges Canal.....	7,696,439 46			7,696,439 46
Beauharnois Canal.....	1,636,690 26			1,636,690 26
Lake St. Francis.....			75,906 71	75,906 71
Cornwall Canal.....	1,945,624 73	5,297,179 48		7,242,804 21
Williamsburg Canal.....	1,320,655 54	13,896 26		1,334,551 80
Farrans Point Canal.....		877,090 57		877,090 57
Rapids Plat Canal.....		2,158,242 00		2,158,242 00
Galops Canal.....		6,120,300 14		6,120,300 14
Galops Rapids.....			1,039,895 65	1,039,895 65
St. Lawrence River and reaches.....			711,238 93	711,238 93
North Channel.....			1,718,778 83	1,718,778 83
Murray Canal.....	1,248,946 71			1,248,946 71
Welland Canal.....	7,693,824 03	21,557,126 98		29,250,951 01
Sault Ste. Marie Canal.....	4,987,498 24			4,987,498 24
Totals.....	29,119,211 82	46,839,273 54	3,843,996 33	79,802,481 59

*Route from Lachine to Ottawa.*

—	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Ste. Anne's Lock.....	134,456 51	1,035,759 12	1,170,215 63
Carillon and Grenville Canals.....	63,053 64	4,119,039 32	4,182,092 96
Culbute Canal (superseded).....	382,391 46		382,391 46
Total.....	579,901 61	5,154,798 44	5,734,700 05

Construction by the Imperial Government is not included. Records relating to same were kept in Ordnance Office, Montreal, and were destroyed by fire in 1852.

*Route from Ottawa to Kingston.*

—	Original Construction.	Enlargement.	Total.
	\$ cts.	\$ cts.	\$ cts.
Rideau Canal.....	4,127,454 21		4,127,454 21
Tay Canal.....	489,599 23		489,599 23
Total.....	4,617,053 44		4,617,053 44

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*Route from St. Johns, P.Q., to Sorel.*

—	Original Construction.	Enlargement.	Total.
	\$ cts.	cts.	\$ cts.
Chambly Canal .....	637,214 66	91,784 83	728,999 49
St. Ours Lock.....	121,537 65	4,306 28	125,843 93
Total .....	758,752 31	96,091 11	854,843 42

*Route from Lake Ontario to Georgian Bay.*

—	Original Construction.	Enlargement.	Total.
	\$ cts.	cts.	\$ cts.
Trent Canal.....	12,464,651 64	.....	12,464,651 64
Total.....	12,464,651 64	.....	12,464,651 64

*Route from Atlantic Ocean to Bras d'Or Lakes.*

—	Original Construction.	Enlargement.	Total.
	\$ cts.	cts.	\$ cts.
St. Peter's Canal—Cape Breton. ....	248,762 84	399,784 30	648,547 14
Total.....	248,762 84	399,784 30	648,547 14

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## COMPARATIVE STATEMENT of Tons of Freight which passed through the canals in seasons of 1911 and 1912.

Name of Canal.	Season of 1911.	Season of 1912.	Number of trips of vessels.	
			Season of 1911.	Season of 1912.
	Tons.	Tons.		
Sault Ste. Marie . . . . .	30,951,709	39,669,655	6,781	7,856
Welland . . . . .	2,537,629	2,851,915	2,480	2,905
St. Lawrence . . . . .	3,105,708	3,477,188	9,923	11,606
Chambly . . . . .	599,829	618,415	4,008	3,705
St. Peter's . . . . .	75,298	74,809	1,260	1,213
Murray . . . . .	163,457	170,081	1,440	1,085
Ottawa . . . . .	320,071	392,350	2,413	3,059
Rideau . . . . .	172,227	160,133	3,062	2,969
Trent . . . . .	57,290	77,150	4,165	3,998
St. Andrew's* . . . . .	47,135	95,549	423	1,260
Total . . . . .	38,030,353	47,587,245	35,955	39,056

\*This is a lock and dam on the Red River, between Winnipeg and Winnipeg, built and operated by the Department of Public Works.

## TABLE showing the dates of opening and closing of the canals for the season of 1912.

	Navigation Opened 1912.	Navigation Closed 1912.
Lachine . . . . .	May 1 . . . . .	December 5
Soulanges . . . . .	April 28 . . . . .	" 6
Grenville . . . . .	May 1 . . . . .	November 30
Carillon . . . . .	" 1 . . . . .	" 30
Ste. Anne's . . . . .	April 25 . . . . .	" 30
Chambly . . . . .	May 1 . . . . .	" 30
St. Ours . . . . .	" 1 . . . . .	" 30
Cornwall . . . . .	April 29 . . . . .	December 10
Williamsburg { Farrans Point . . . . .	" 29 . . . . .	" 13
{ Rapide Plat . . . . .	" 29 . . . . .	" 13
{ Galops . . . . .	" 29 . . . . .	" 13
Murray . . . . .	" 22 . . . . .	" 16
Welland . . . . .	" 22 . . . . .	" 19
Sault Ste. Marie . . . . .	" 24 . . . . .	" 19
Rideau . . . . .	May 1 . . . . .	" 3
{ At Kingston . . . . .	" 1 . . . . .	November 27
{ Lake Simcoe to Fenelon Falls . . . . .	" 8 . . . . .	October 26
Trent . . . . .	" 3 . . . . .	December 1
{ Fenelon Falls to Lakefield . . . . .	" 20 . . . . .	November 6
{ Lakefield to Peterborough . . . . .	" 23 . . . . .	December 1
{ Peterborough to Healey Falls . . . . .	April 23 . . . . .	December 11, 1913.
St. Peter's . . . . .	" 22 . . . . .	January

PART IX

ACTS AUTHORIZING RAILWAY SUBSIDIES

IN FORCE MARCH 31, 1913





## 9-10 EDWARD VII.

### CHAP. 51.

An Act to authorize the granting of subsidies in aid of the construction of the lines of railway therein mentioned.

*[Assented to 4th May, 1910.]*

**H**IS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

**1.** The Governor in Council may grant a subsidy of \$3,200 Subsidies for railways. per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway, not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile:—

1. For a line of railway from Tusket Wedge to a point on the Halifax and South Western Railway at or near Riverdale station, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 27; not exceeding 8 miles.

2. To the Halifax and South Western Railway Company, for a line of railway from Lunenburg to Bridgewater via Upper La Have, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 28; not exceeding 12 miles.

3. To the Inverness Railway and Coal Company, for a line of railway from Cheticamp to a point on the line already built between Broad Cove and Point Tupper, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 17; not exceeding 37 miles.

4. To the Margaree Coal and Railway Company, for a line of railway from a point at or near Orangedale, on the Intercolonial Railway, thence by the east side of Lake Ainslie and Ste. Rosa, to Chimney Corner Cove, not exceeding 46 miles; and for a line of railway from a point on the Intercolonial Railway between Orangedale and Point Tupper to Caribou Cove on Inhabitants Bay or River, not exceeding 4 miles; in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 18; not exceeding in all 50 miles.

5. For a line of railway from a point on the Dominion Atlantic Railway to the Government pier or wharf at Canning, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 7; not exceeding 1 mile.

6. For a line of railway from Brazil Lake on the Dominion Atlantic Railway to Kemptville, Nova Scotia, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 16; not exceeding 11 miles.

7. To the Dominion Atlantic Railway Company, for a line of railway from Centreville on the Dominion Atlantic Railway, westerly to Weston, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 30; not exceeding 15 miles.

8. For a line of railway from a point on the Intercolonial Railway at or near Dartmouth, in the county of Halifax, to a point at or near Deans Settlement, in the county of Halifax, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 21; not exceeding 80 miles.

9. For a line of railway from a point at or near Deans settlement, in the county of Halifax, to a point at or near Melrose, in the county of Guysborough, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 22; not exceeding 52 miles.

10. For a line of railway from a point at or near New Glasgow, in the county of Pictou, to a point at or near Melrose, in the county of Guysborough, and from the said point at or near Melrose to Guysborough, in the county of Guysborough, with a branch line to Country Harbour, in the county of Guysborough, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 23; not exceeding in all 116 miles.

11. To the International Railway Company of New Brunswick, for  $3\frac{1}{2}$  miles of its railway, being the distance which the subsidy granted by chapter 63 of 1908, section 1, item 15, is short of covering.

12. For a line of railway from Grand Falls to St. John, New Brunswick, in lieu of the subsidies granted by chapter 40 of 1907, section 1, items 2, 3 and 10, respectively, and in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 69; not exceeding 228 miles.

13. For a line of railway from Connors, at the terminus of the Temiscouata Railway, to a point on the boundary line between New Brunswick and Quebec, at the foot of Beau Lake, in lieu

of

## SESSIONAL PAPER No. 20

of the subsidy granted by chapter 40 of 1907, section 1, item 25; not exceeding 18 miles.

14. To the York and Carleton Railway Company, for a line of railway from its present terminus to a point on the National Transcontinental Railway, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 33; not exceeding 9 miles.

15. For a line of railway from a point on the Canadian Pacific Railway at or near Plaster Rock to Riley Brook, in lieu of the subsidy granted by chapter 63, of 1908, section 1, item 31; not exceeding 28 miles.

16. To the Atlantic, Quebec and Western Railway Company, for a line of railway from Paspébiac to Gaspé, as near the shore as practicable, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 9, for a line between the points above mentioned; not exceeding 102 miles.

17. To the Canadian Northern Quebec Railway Company, for a line of railway from a point at or near Arundel to a point in the municipality of the united townships of Preston and Hartwell, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 11, for a line of railway between the points above mentioned; not exceeding 30 miles.

18. For a line of railway from Roberval westward towards James Bay, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 9; not exceeding 100 miles.

19. To the Quebec and Lake St. John Railway Company, for the following lines of railway:—

- (a) from Valecartier station to St. Catherine, not exceeding 3·8 miles;
- (b) from Valecartier station towards Gosford, not exceeding 5½ miles;
- (c) from the end of the 35th mile of the branch to La Tuque, on the River St. Maurice, to La Tuque Falls, not exceeding 5 miles;
- (d) from La Tuque Falls to the mouth of the River Croche, not exceeding 5 miles;
- (e) from a point on the La Tuque branch to the steamboat landing near La Tuque, not exceeding 1·6 miles;
- (f) from Herbertville to St. Joseph d'Alma; not exceeding 10 miles;
- (g) from Chicoutimi south or southeast; not exceeding 5 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, items 43, 44 and 72, respectively; not exceeding 35·9 miles.

20. To the Quebec and New Brunswick Railway Company, for a line of railway from Chaudière Junction to a point at or near the International boundary, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 25; not exceeding 62 miles.

21. To the Eastern Townships Railway Company, for a line of railway from the Intercolonial Railway at St. Leonard's

Junction

Junction to Dudswell, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 41; not exceeding 36 miles.

22. To the L'Avenir and Melbourne Railway Company for a line of railway from Melbourne to Drummondville, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 71; not exceeding 28 miles.

23. To the Lotbinière and Megantic Railway Company, for a line of railway to extend its railway southerly from a point at or near Lyster, in Megantic county, to or towards a point at or near Lime Ridge, in the township of Dudswell, not exceeding 50 miles; and for a line of railway from a point on its line in the township of Inverness, to a point at or near the bridge over the St. Lawrence River at or near Quebec; not exceeding 30 miles; in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 19; not exceeding in all 80 miles.

24. For a line of railway from Joliette to or near Lake Manuan, in lieu of the subsidy granted by chapter 57 of 1903, section 2, item 9, not exceeding 60 miles.

25. For a line of railway from St. Joachim towards Seven Islands, including branches to Murray Bay and Baie St. Paul, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 11; not exceeding 170 miles.

26. For a line of railway from a point at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 26; not exceeding 15 miles.

27. To the Ha Ha Bay Railway Company, for a line of railway from a point at or near Jonquières village to Baie des Ha Ha, via Laterrière village, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 24; not exceeding 24 miles.

28. To the St. Mary's and Western Ontario Railway Company, for a line of railway from Embro to Exeter, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 60; not exceeding 36 miles.

29. To the Manitoulin and North Shore Railway Company for the following lines of railway:—

(a) from a point on the said company's line of railway between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay Railway; not exceeding 76 miles;

(b) from Little Current thence crossing the Canadian Pacific Railway, at or near Stanley, and thence to Sudbury; not exceeding 88 miles;

(c) from a point at or near Sudbury, northerly, not exceeding 30 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 51; not exceeding in all 194 miles.

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30. To the Algoma Central and Hudson Bay Railway Company for the following lines of railway:—

- (a) from Sault Ste. Marie to a point on the Canadian Pacific Railway between White River and Dalton stations in the district of Algoma, not exceeding 200 miles;
- (b) from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway, not exceeding 25 miles;
- (c) from a point on the Canadian Pacific Railway, northerly, towards the National Transcontinental Railway, not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 43 of 1906, section 1, item 2, and chapter 63 of 1908, section 1, item 61; not exceeding in all 275 miles.

31. To the Bracebridge and Trading Lake Railway Company, for a line of railway from Bracebridge, in Muskoka, to a point at or near Baysville, Ontario, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 8; not exceeding 16 miles.

32. To the Lac Seul, Rat Portage and Keewatin Railway Company, for a line of railway from a point at or near Kenora to the National Transcontinental Railway, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 63, for 18 miles; not exceeding 22 miles.

33. To the Canadian Northern Quebec Railway Company, for a line of railway from Montreal to Hawkesbury, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 48; not exceeding 65 miles.

34. To the Nipigon Railway Company for the following lines of railway:—

- (a) from a point at or near Nipigon station on the line of the Canadian Pacific Railway to Nipigon Lake; not exceeding 30 miles;
- (b) from a point on Nipigon Bay of Lake Superior to a point on the west of Lake Helen on the line of the Nipigon Railway; not exceeding  $3\frac{1}{2}$  miles;
- (c) from a point on the line of the Nipigon Railway at or near the crossing of the French River to a point on Lake Jesse, by way of Cameron's Falls; not exceeding  $1\frac{1}{2}$  miles;
- (d) from a point on the north shore of Lake Nipigon, northerly; not exceeding 45 miles.

the said subsidies being granted in lieu of the subsidies granted by chapter 63 of 1908, section 1, item 4: not exceeding in all 80 miles.

35. To the Ontario, Northern and Timagami Railway Company, for a line of railway from a point at or near Sturgeon Falls, in a northwesterly direction, to a point on the westerly shore of Lake Timagami, in the district of Nipissing, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 6; not exceeding 50 miles.

36. For a line of railway from Sharbot Lake or Bathurst station, in the province of Ontario, or between these points, via

Lanark village, to Carleton Place, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 3; not exceeding 41 miles.

37. To the Erie, London and Tillsonburg Railway Company, for a line of railway from Port Burwell to London, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 29; not exceeding 35 miles.

38. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 41; not exceeding 51 miles.

39. To the Kingston, Smith's Falls and Ottawa Railway Company, for a line of railway from Kingston to Ottawa, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 19; not exceeding 101 miles.

40. To the Pacific, Northern and Omineca Railway Company, for a line of railway from Edmonton, northwesterly, to or towards the Peace River, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 51; not exceeding 110 miles.

41. To the Southern Central Pacific Railway Company, for the following lines of railway:—

(a) from a point two miles west of Pincher station on the Crow's Nest Pass branch of the Canadian Pacific Railway, northeasterly; not exceeding 10 miles;

(b) from a point two miles west of Pincher station on the Crow's Nest Pass branch of the Canadian Pacific Railway, southwesterly; not exceeding 40 miles;

the said subsidies being granted in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 37; not exceeding in all 50 miles.

42. To the Kettle River Valley Railway Company, for the following lines of railway:—

(a) from Midway to a junction near Merritt with the Nicola, Kamloops and Similkameen Railway; not exceeding 250 miles;

(b) from a point on the Company's line of railway near Coldwater River to a point on the Fraser River; not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 40 of 1907, section 1, item 18, and chapter 63 of 1908, section 1, items 58 and 59, respectively; not exceeding in all 300 miles.

43. To the Kootenay Central Railway Company, for a line of railway from Golden towards the International boundary via Windermere and Fort Steele, thence crossing the Crow's Nest Pass Railway, at or near Elko; in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 31; not exceeding 186 miles.

44. To the Esquimalt and Nanaimo Railway Company, for a line of railway from a point on its main line of railway, at or near Duncan's to Cowichan Lake, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 67; not exceeding 24 miles.

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45. For a line of railway from Montreal to a point on the National Transcontinental Railway, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 49; not exceeding 200 miles.

46. To the Little Nation River Railway Company, for a line of railway from Papineauville, on the Canadian Pacific Railway, towards Lake Nominig, in lieu of subsidy granted by chapter 63 of 1908, section 1, item 70; not exceeding 30 miles.

2. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals nor the cost of right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the chief engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway. "Cost" defined.

3. The subsidies hereby authorized towards the construction of any railway shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:— How subsidies shall be paid.

(a) Upon completion of the work subsidized; or,

(b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,

(c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) With respect to (b) and (c), part one way, part the other.

4. The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted, unless they are Conditions.

already commenced, shall be commenced within two years from the first day of August, 1910, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines shall be subject to the approval of the Governor in Council.

As to running  
powers.

**5.** The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

Proviso.

Transporta-  
tion of  
Government  
supplies, etc.

**6.** Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

Production  
of accounts.

**7.** As respects all railways for which subsidies are granted by this Act, the company at any time owning or operating  
any

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any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

8. The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

As to  
Canadian  
steel rails.

9. Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the chief engineer of the Department of Railways and Canals, and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer, and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

Mode of  
payment of  
certain  
railway  
subsidies.

Proviso.

(a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;

(b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;

(c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.



## 2 GEORGE V.

## CHAP 7.

## An Act to aid the construction of the Canadian Northern Alberta Railway.

[Assented to 1st April, 1912.]

WHEREAS, by chapter 6 of the statutes of 1910, authority <sup>Preamble.</sup> was given to the Governor in Council to aid and assist the construction of the line of railway of the Canadian Northern Alberta Railway Company, hereinafter called "the Company," by guaranteeing the principal and interest of the bonds, debentures, debenture stock or other securities of the Company to the extent of thirteen thousand dollars per mile for the first fifty miles of the line so aided, and for the remainder of the said line to an amount of twenty-five thousand dollars per mile, not exceeding in all one hundred and fifty miles, as in the said Act set out, and the Governor in Council, pursuant to the said authority, has granted such aid accordingly; and whereas the Company has authority, under the said Act, to construct and operate a line of railway from a point at or near Edmonton or Strathcona to a point in the province of British Columbia in or near the Yellowhead Pass, and fifty miles west of the boundary of the said province: Therefore His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Alberta Railway Aid Act, 1912.* <sup>Short title.</sup>

2. His Majesty on behalf of the Dominion of Canada, <sup>Aid</sup> hereinafter called "the Dominion," may aid and assist <sup>authorized.</sup> the construction and completion of a line of railway of the Company extending from a point on the line of the railway of

of the Company one hundred and fifty miles westerly from St. Albert, thence in a westerly direction to the boundary of the province of British Columbia at or in the Yellowhead Pass, for a distance not exceeding one hundred and fifteen miles, by guaranteeing the principal and interest of the bonds, debentures, debenture stocks and other securities, hereinafter called "securities," secured as hereinafter mentioned, of the Company, to the extent of thirty-five thousand dollars per mile of the said line of railway so aided, not exceeding in all one hundred and fifteen miles; the interest upon the said securities to be paid at the rate of three and one-half per cent per annum, payable half yearly, the principal to be payable in fifty years from the passing of this Act.

**3.** The said securities so guaranteed shall be secured by a deed or deeds of trust by way of mortgage or charge to a trustee or trustees, approved of by the Governor in Council, and such deed or deeds of trust shall respectively grant a first mortgage or charge upon the said line of railway so aided, and the right of way, station grounds, or other real estate and interest therein, buildings and other structures and improvements, rolling stock and equipment, plant, machinery, tools, supplies, materials and other personal properties, present and future, acquired for the purposes of the said line so aided, and in connection with operating, repairing and maintaining it, and the tolls, incomes and revenues of the Company arising and to arise from the said line, and the rights, privileges, franchises and powers of the Company now or hereafter held with respect to and in connection with the said line and the operation, maintenance and repair thereof.

**4.** The kind of securities to be guaranteed as aforesaid, and the forms thereof, and the form and terms of the deed or deeds of trust securing them, and the times and manner of the issue of securities and the disposition of the moneys to be raised thereon by sale, pledge or otherwise, pending the expenditure of such moneys for the purposes of the line of railway so aided, and the forms and manner of guarantee, shall be such as the Governor in Council approves, and such terms, provisions and conditions may be included in such deed or deeds of trust as the Governor in Council deems expedient or necessary.

**5.** The said guarantee shall be signed by the Minister of Finance, or such officer as is designated by the Governor in Council to sign it; and upon being so signed the Dominion shall become liable as guarantor for the payment of the principal and interest of the securities so guaranteed, according

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according to the tenor thereof, and the said payment shall form a charge upon the Consolidated Revenue Fund.

6. Any moneys paid by the Dominion under any guarantee herein provided for shall be held to be paid in discharge of the liability of the Dominion and not in discharge of the liability of the Company under the securities so guaranteed, or under any deed of trust securing them, and the moneys so paid shall be held to be still secured by the said securities and deed of trust, and the Dominion shall be subrogated in and to all the rights of the holders of such securities, the interest upon or the principal of which has been paid by the Dominion, and the Dominion shall, with respect to all moneys so paid, be in all respects in the position of security holders with respect to whose securities default has been made in payment to the extent of the moneys paid by the Dominion.

Liability of  
Dominion  
discharged  
by payments

7. The decision of the Governor in Council as to the length of the mileage of the said line of railway so to be aided shall, for the purposes of this Act, be final.

Length  
of lines.

8. The books of the Company shall at all times be open for inspection for and on behalf of the Dominion by any person named in that behalf by the Governor in Council or the Minister of Finance.

Inspection  
of books.

9. The Canadian Northern Railway Company shall, by guarantee included in the said deed or deeds of trust, or in some other instrument agreed to by the Governor in Council or the Minister of Finance and the last named company, in such form as the Governor in Council approves, guarantee to the Dominion the due payment by the Company of the principal and interest of all securities issued and guaranteed under the provisions of this Act, according to the tenor and effect of such securities respectively, and in accordance with the terms of the said deed or deeds of trust, and shall also guarantee to the Dominion the due payment by the Company of all loss or costs which the Dominion may sustain or be put to in enforcing, after default, the provisions of the said deed or deeds of trust against the line of railway and premises thereby mortgaged and charged.

Guarantee by  
Canadian  
Northern  
Railway.

Principal  
and interest.

Costs of  
default.

10. The line hereby aided, as set forth or described in section 2 of this Act, shall be constructed and completed according to the following specifications:—

Standard of  
construction.

Bridges over rivers and large streams are to be of concrete and steel construction and to be built to the classification of the Heavy Standard Specification of the Department of Railways and Canals, dated one thousand nine hundred and eight.

Bridges.

Bridges

Trestles. Bridges of pile or frame trestle may be constructed over  
Culverts. small streams which can be taken care of by culverts, such culverts to be constructed within a reasonable time after the line is put in operation, of which time the Governor in Council shall be the sole judge.

Rails. The line of railway shall be laid with steel rails, not less than eighty pounds to the lineal yard, with standard fastenings.

Curves and grades. The maximum curvature shall not be of less radius than seven hundred and sixteen feet, and the grades against east bound traffic shall not exceed five-tenths of one per cent, or 26·40 feet per mile; or six-tenths of one per cent, or 31·68 feet per mile, against west-bound traffic; provided that under exceptional conditions, with the consent of the Governor in Council, less radius of curvature and heavier grades may be allowed, on the recommendation of the chief engineer of the Department of Railways and Canals, approved by the Minister of Railways and Canals, but in no case shall the curvature exceed five hundred and seventy-three feet radius, or the gradients exceed 52·80 feet to the mile.

## 2 GEORGE V.

### CHAP. 8.

#### An Act respecting aid toward the construction of the Canadian Northern Alberta Railway.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Alberta Railway Act, 1912.* Short title.

2. The aid and assistance which, under *The Canadian Northern Alberta Railway Act, 1910*, (hereinafter called "the said Act"), the Governor in Council was authorized to give to the Canadian Northern Alberta Railway Company (hereinafter called "the Company") in respect of the construction of the one hundred and fifty miles of the line of railway therein described (hereinafter called "the old line") may, notwithstanding anything in the said Act, be applied to the first one hundred and fifty miles of the Company's line of railway at present constructed or located running from St. Albert, in the province of Alberta, in a generally westerly direction toward the Yellowhead Pass, such last mentioned one hundred and fifty miles being hereinafter referred to as "the new line." Aid to company may be applied to new line.

3. The Governor in Council may cause to be executed by the Minister of Finance, or such other officer as the Governor in Council may designate, an instrument, in form approved by the Governor in Council, supplementary to the deed of trust, by way of mortgage or charge, made under the authority of the said Act and dated the twenty-second

day

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day of March one thousand nine hundred and eleven, (herein called the original mortgage), for the purpose of giving effect to the provisions of this Act.

Securities  
already issued  
to be a  
charge on  
new line

4. Upon the execution of such instrument by the Company and the Minister of Finance, or the other person as aforementioned, the securities issued under the original mortgage shall form a charge upon the new line instead of upon the old line, and the proceeds of the guaranteed securities issued under the original mortgage shall thereupon be applied in and toward the construction of the new line.

Trustees  
to execute.

5. The trustees of the original mortgage shall concur with the Company and the Governor in Council in executing, or causing to be executed, the supplementary instrument aforementioned.

Amendment  
of contract  
for construction.

6. Upon the passing of this Act the contract made between His Majesty the King and the Company, dated the second day of September, one thousand nine hundred and eleven, in respect of the construction of the line of railway aided under the said Act may be amended by the parties thereto so as to provide for the construction and completion of the new line instead of the line therein mentioned, and the several parties to the said contract and to the original mortgage are hereby authorized and empowered to execute the several documents and make the several amendments necessary to carry into effect the intent of this Act.

## 2 GEORGE V.

## CHAP. 9.

An Act to authorize the granting of a Subsidy to the Canadian Northern Pacific Railway Company in aid of the construction of the railway therein mentioned.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Canadian Northern Pacific Railway Aid Act*. Short title.

2. The Governor in Council may grant a subsidy of twelve thousand dollars per mile to the Canadian Northern Pacific Railway Company towards the construction of a railway from a point at Yellowhead Pass to Vancouver and the mouth of the Fraser river, not exceeding five hundred and twenty-five miles. Subsidy authorized.

3. The said subsidy shall be payable out of the Consolidated Revenue Fund of Canada and may, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:— Manner and conditions of payment.

- (a) upon the completion of the work subsidized; or,
- (b) by instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; the cost for the purposes of this paragraph to be determined by the Governor in Council; or,
- (c) upon the progress estimates on the certificate of the chief engineer of the Department of Railways and

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and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) with respect to (b) and (c), part one way part the other.

Time for  
construction  
limited.

4. The said railway, unless already commenced, shall be commenced within two years from the first day of August, nineteen hundred and twelve, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals. and specified in a contract between the said Company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location of the said railway shall be subject to the approval of the Governor in Council.

Contract for  
construction.

Location.

Transporta-  
tion of  
Government  
supplies, etc.

5. The said Company, its successors and assigns, and any person or company controlling or operating the said railway or portion thereof, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the railway in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed and the company performing it, and in case of disagreement then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the said Company with a sum equal to three per cent per annum on the amount of the subsidy received by the Company under this Act.

Production  
of accounts.

6. As respects the railway for which such subsidy is granted the Company at any time owning or operating it shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers, showing the cost of constructing the railway, the cost of operating it, and the earnings thereof.

Canadian  
steel rails,  
materials,  
and rolling  
stock.

7. The Governor in Council may make it a condition of the granting of the subsidy herein provided that the said Company shall lay the railway with new steel rails and fastenings made in Canada, and shall purchase all materials and

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and supplies required for the construction of the railway, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.



## 2 GEORGE V.

## CHAP. 48.

An Act to authorize the granting of Subsidies in aid of the construction of the railways and bridges therein mentioned.

[Assented to 1st April, 1912.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Railway Subsidies Act, 1912.* Short title.

2. The Governor in Council may grant a subsidy of \$3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway, not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile:—

1. For a line of railway from Liverpool, via Milton, to Caledonia, Nova Scotia, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 5; not exceeding 30 miles.

2. For a line of railway from St. John to Grand Falls, New Brunswick, exclusive of a railway bridge across the Kennebecasis

Kennebecasis River, at or near Perry Point, and two railway bridges across the St. John River, one at or near Mistake and one at or near Andover; in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 12; not exceeding 228 miles.

3. To the L'Avenir and Melbourne Railway Company for a line of railway from Melbourne to Drummondville, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 22; not exceeding 28 miles.

4. To the Ha Ha Bay Railway Company for the following lines of railway:—

(a) from a point on the Quebec and Lake St. John Railway in the township of Jonquières, at or near St. Mathias, to Ha Ha Bay; not exceeding 20 miles;

(b) from Labrosse Junction to the Saguenay River, northerly through the town of Chicoutimi; not exceeding 5 miles;

(c) from La Terrière Junction, southerly, to Lake Kenogami, via La Terrière village; not exceeding 12 miles.

(d) from a point on the Ha Ha Bay Railway, at or near Bagotville village, easterly, to the village of St. Alexis; not exceeding 3 miles;

the said subsidies sub-items (a), (c) and (d) being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 27; and the subsidy sub-item (b) being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 19, sub-item (g); not exceeding in all 40 miles.

5. For a line of railway at or near Ste. Agathe des Monts station towards the township of Howard, in the county of Argenteuil, passing near Lake St. Joseph and St. Mary in a southerly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 26; not exceeding 15 miles.

6. To the Interprovincial and James Bay Railway Company, for a line of railway from a point on the Lake Temiscamingue Colonization Railway at or near Timiskaming to or towards the De Quinze River; in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 42; not exceeding 50 miles.

7. To the Canadian Northern Quebec Railway Company, for a line of railway from a point at or near Arundel to a point in the municipality of the united townships of Preston and Hartwell, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 17; not exceeding 30 miles.

8. To the Quebec and Saguenay Railway Company, for the following lines of railway:—

(a) from St. Joachim, northeasterly; not exceeding 62.8 miles;

(b) from a point 62.8 miles northeasterly from St. Joachim towards Seven Islands; not exceeding 107.2 miles;

the

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the said subsidies being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 25; not exceeding in all 170 miles.

9. For a line of railway from a point at or near Montreal to a point at or near Mile 837 west of Moncton on the National Transcontinental Railway, in lieu of subsidy granted by chapter 51 of 1910, section 1, item 45; not exceeding 200 miles.

10. To the Algoma Central and Hudson Bay Railway Company, for the following lines of railway:—

(a) from Sault Ste. Marie to a point on the Canadian Pacific Railway between White River and Dalton stations in the district of Algoma; not exceeding 200 miles;

(b) from Michipicoten Harbour, Lake Superior, towards the main line of the Canadian Pacific Railway; not exceeding 25 miles;

(c) from a point on the Canadian Pacific Railway, northerly, towards the National Transcontinental Railway; not exceeding 50 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 30; not exceeding in all 275 miles.

11. To the Algoma Eastern Railway Company (formerly the Manitoulin and North Shore Railway Company) for the following lines of railway:—

(a) from a point on the said company's line of railway between Little Current and Sudbury, westerly towards the Algoma Central and Hudson Bay Railway; not exceeding 76 miles;

(b) from a point at or near Sudbury, northerly; not exceeding 30 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 29, sub-items (a) and (c) respectively; not exceeding in all 106 miles.

12. To the Tillsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Ingersoll to Stratford, or to a point on the Grand Trunk Railway between Berlin and Stratford, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 12; not exceeding 35 miles.

13. To the Lac Seul, Rat Portage and Keewatin Railway Company, for a line of railway from a point at or near Kenora to the National Transcontinental Railway, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 32; not exceeding 22 miles.

14. To the Toronto, Lindsay and Pembroke Railway Company, for a line of railway from Golden Lake to Bancroft, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 38; not exceeding 51 miles.

15. To the Canadian Pacific Railway Company, for a line of railway from a point at or near Teulon to a point on

the Icelandic River, in lieu of the subsidy granted by chapter 43 of 1906, section 1, item 27; not exceeding 35 miles.

16. To the Vancouver, Westminster and Yukon Railway Company, for a line of railway from Vancouver via Second Narrows of Burrard Inlet, northerly, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 55; not exceeding 100 miles.

17. To the Kootenay Central Railway Company, for the following lines of railway:—

(a) from Golden via Windermere and Fort Steele to a point on the British Columbia Southern Railway at or near Jukeson; not exceeding 175 miles;

(b) from a point on the British Columbia Southern Railway at or near Caithness towards the International boundary; not exceeding 25 miles;

the said subsidies being granted in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 43; not exceeding in all 200 miles.

18. To the Kettle Valley Railway Company, for a line of railway from a point at or near Grand Forks to a point 50 miles up the North Fork, and East or West Fork of North Fork, of Kettle River, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 1; not exceeding 50 miles.

19. To the Esquimalt and Nanaimo Company, for the following lines of railway:—

(a) from Wellington to Alberni; not exceeding 60 miles;

(b) from a point at or near McBride Junction to or towards the village of Sandwich; not exceeding 45 miles;

(c) from the village of Sandwich to Campbell River; not exceeding 38 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 40 of 1907, section 1, item 20, and chapter 63 of 1908, section 1, item 35; not exceeding in all 143 miles.

20. For a line of railway from a point on the Esquimalt and Nanaimo Railway, near Campbell River, towards Fort George, on the line of the Grand Trunk Pacific Railway, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 54; not exceeding 100 miles.

21. To the Fredericton and Grand Lake Coal and Railway Company, for a line of railway from a point on the Intercolonial Railway at Gibson to a point at or near Minto, together with a branch line from a point on the above mentioned line to Marysville; not exceeding 35 miles.

22. To the Great Northern Mining and Railway Company, Limited, for a line of railway from Little River through Belle Marche to Eastern Harbour; not exceeding 3 miles.

23. To the Southampton Railway Company, for a line of railway from a point at or near Millville to a point on the St. John River near the Pokiok Bridge; not exceeding 13 miles.

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24. To the Northern New Brunswick and Seaboard Railway Company, for a line of railway from the Drummond mines, at Austin Brook, a branch of the Nipisiguit River above Great Falls, in the county of Gloucester, to a point on the Intercolonial Railway, and from such point to Alston Point, on the north side, or to Caron Point, on the south side of the entrance to Bathurst Harbour in the said county; not exceeding 26 miles.

25. To the North Shore Railway Company, for the following lines of railway:—

(a) from a point at or near Adamsville, in the county of Kent, to a point at or near Snowshoe Lake in the said county, connecting with the Grand Trunk Pacific Railway; not exceeding 20 miles;

(b) from Beersville, in the county of Kent, via Roxton, to a point at or near Richibucto Head, in the said county; not exceeding 20 miles;

not exceeding in all 40 miles.

26. For a line of railway from a point at or near Rosevale in the County of Albert to Stoney Creek in the said county, and thence to the city of Moncton; not exceeding 22 miles.

27. To the Quebec Central Railway Company, for the following lines of railway:—

(a) for an extension of its line of railway from a point (30 miles from St. George) in the parish of St. Justine, county of Dorchester, to a point in the parish of St. Sabine, in the county of Bellechasse; not exceeding 1<sup>3</sup>/<sub>4</sub> miles;

(b) for an extension of its line of railway from a point (31<sup>3</sup>/<sub>4</sub> miles from St. George) in the parish of St. Sabine, county of Bellechasse, to a point in the township of Dionne, county of L'Islet; not exceeding 50 miles; not exceeding in all 51<sup>3</sup>/<sub>4</sub> miles.

28. To the Canada and Gulf Terminal Railway Company, for a line of railway from Matane, easterly, to Gaspé Basin; not exceeding 200 miles.

29. To the Grand Lake and Bell River Railway Company, for a line of railway from a point on the National Transcontinental Railway, at or near Bell River, thence following the direction of Bell River to Twenty-one Mile Bay, an arm of Grand Lake, or to Rabbit Lake on the Ottawa River, in the county of Pontiac; not exceeding 45 miles.

30. To the St. Charles and Huron River Railway Company, for a line of railway from a point on the main line of the Quebec and Lake St. John Railway, at Indian Lorette station, thence up the valley of the St. Charles River in a northerly direction to Stoneham; not exceeding 7<sup>5</sup>/<sub>8</sub> miles.

31. For a line of railway from a point on the National Transcontinental Railway, at or near Mile 837 west of Moncton,

Moncton, in a northerly and northwesterly direction, to a point at or near the mouth of the Nottaway River on James Bay; not exceeding 300 miles.

32. To the Simcoe, Grey and Bruce Railway Company, in respect of fifty miles of its proposed railway between the towns of Kincardine and Orillia, the said fifty miles to include that portion of the said line connecting the towns of Owen Sound and Meaford.

33. To the Algoma Central and Hudson Bay Railway Company, for a line of railway from a point fifty miles northerly from the junction of its line of railway with the Canadian Pacific Railway, northerly to a junction with the National Transcontinental Railway; not exceeding 65 miles.

34. To the Rainy River Radial Railway Company, for a line of railway from a point on the northern boundary of the state of Minnesota at or near the town of Fort Frances, to a point on the Lake of the Woods, at or near the mouth of Little Grassy River; not exceeding 50 miles.

35. To the Lake Erie and Northern Railway Company, for the following lines of railway:—

(a) from the town of Galt to Port Dover; not exceeding 58 miles;

(b) from the town of Paris (on the line from the town of Galt to Port Dover) to the village of Ayr; not exceeding 10 miles;

not exceeding in all 68 miles.

36. To the Bruce Mines and Algoma Railway Company, for a line of railway from a point on its line of railway at or near Rock Lake Mine in a generally northerly and easterly direction to or towards a point on the main line of the Canadian Pacific Railway near the crossing of the said railway of the Winneboga River; not exceeding 50 miles.

37. To the Manitoba and North Western Railway Company, for a line of railway from a point at or near Hamiota to a point at or near Birtle; not exceeding 30 miles.

38. To the Alberta Pacific Railway Company, for a line of railway from a point at or near the town of Cardston in a northwesterly direction via Pincher Creek to a point on the Crow's Nest Pass Branch of the Canadian Pacific Railway Company at or near Lundbreck, thence northerly and west of the Porcupine Hills towards Calgary; not exceeding 100 miles.

39. To the Burrard Inlet Tunnel and Bridge Company, for the following lines of railway:—

(a) from the town of Eburne on the Fraser River to a point at or near the mouth of Seymour Creek on the north shore of the Second Narrows; not exceeding 10 miles;

(b) from a point at or near Seymour Creek on the north shore of the Second Narrows to Deep Cove on the north arm of Burrard Inlet; not exceeding 5 miles;

(c)

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(c) from a point at or near Seymour Creek on the north shore of the Second Narrows to a point on Horseshoe Bay; not exceeding 14 miles;

(d) from a point at or near Pender street in the city of Vancouver to a point at or near lot 264, North Vancouver; not exceeding 3 miles;

not exceeding in all 32 miles.

40. To the Caribou, Barkerville and Willow River Railway Company, for a line of railway from a point on the Grand Trunk Pacific Railway, at or near Eagle Lake, to a point on the Caribou Road at or near the town of Barkerville; not exceeding 107 miles.

41. To the Naas and Skeena Rivers Railway Company, for a line of railway from the Nasoga Gulf or some other point on the waters of the Portland Inlet or Naas River to or towards the anthracite coal deposits on the Skeena River near Ground Hog Mountain; not exceeding 100 miles.

42. To the Kettle Valley Railway Company, for a line of railway from a point at or near Penticton on Okanagan Lake to a point on the International boundary; not exceeding 50 miles.

43. To the Calgary and Fernie Railway Company, for a line of railway from a point at or near the city of Calgary in the province of Alberta, in a southwesterly direction, via Kananaskis Pass and the headwaters of the Elk River to or towards the city of Fernie, in the province of British Columbia; not exceeding 100 miles.

44. To the Grand Trunk Pacific Railway Company, for a line of railway from Harte southwesterly into the city of Brandon; not exceeding 25 miles.

3. The Governor in Council may grant the subsidies hereinafter mentioned towards the construction and completion of the bridges also hereinafter mentioned, that is to say:—

Subsidies for  
bridges.

1. To the Vancouver, Westminster and Yukon Railway Company, towards the construction and completion of a railway bridge across Burrard Inlet, in lieu of the subsidy granted by chapter 63 of 1908, section 2, item 6; not exceeding \$350,000.

2. To the Canadian Pacific Railway Company (lessees of the Calgary and Edmonton Railway Company) towards the construction and completion of a bridge over the Saskatchewan River connecting Strathcona and Edmonton, 15 per cent upon the amount expended thereon, in lieu of the subsidy granted by chapter 63 of 1908, section 2, item 2; not exceeding \$126,000.

3. To the Canadian Pacific Railway Company, towards the construction and completion of a bridge over the Saskatchewan River at Outlook, Saskatchewan, 15 per cent upon

upon the amount expended thereon; not exceeding \$115,000.

4. To the Kettle Valley Railway Company, towards the construction and completion of a railway bridge over the Fraser River, near Hope, British Columbia; not exceeding \$250,000.

5. To the Caribou, Barkerville and Willow River Railway Company, towards the construction and completion of all its railway bridges (about twenty in number) over the Willow River, 25 per cent upon the total amount expended thereon; not exceeding \$95,000.

6. To the Grand Trunk Pacific Railway Company, towards the construction and completion of a railway bridge over the Assiniboine River at the city of Brandon, 25 per cent upon the amount expended thereon; such bridge to be completed without unnecessary delay.

"Cost"  
defined.

4. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway nor the cost of terminals nor the cost of right of way of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the chief engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

How  
subsidies  
shall be  
paid.

5. The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

- (a) Upon the completion of the work subsidized; or,
- (b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,
- (c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made

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made justifies the payment of a sum not less than thirty thousand dollars; or,

(d) With respect to (b) and (c), part one way, part the other.

**6.** The subsidies hereinbefore authorized to be granted Conditions. to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railway and bridges respectively; all the lines and the bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, 1912, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

**7.** The granting of such subsidies and the receipt thereof As to running powers. by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway and bridges so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

**8.** Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it Transportation of Government supplies, etc.  
has

has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

Production  
of accounts.

**9.** As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways or bridges shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

As to  
Canadian  
steel rails.

**10.** The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway and bridges, and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

Mode of  
payment of  
certain  
railway  
subsidies.

**11.** Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the Company, and upon the report of the chief engineer of the Department of Railways and Canals and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion

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completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

- (a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;
- (b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;
- (c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.



## 3-4 GEORGE V.

## CHAP. 10.

An Act to authorize the granting of subsidies in aid of the construction of certain lines of railway of the Canadian Northern Ontario Railway Company and the Canadian Northern Alberta Railway Company respectively.

[Assented to 6th June, 1913.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The Governor in Council may grant a subsidy of six thousand four hundred dollars per mile to the Canadian Northern Ontario Railway Company, towards the construction of a railway from the city of Toronto, in the province of Ontario, to the city of Ottawa, in the said province, not exceeding two hundred and fifty miles.

Subsidy authorized for Toronto to Ottawa line.

2. The Governor in Council may grant a subsidy of twelve thousand dollars per mile towards each of the under-mentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated) namely:—

For Ottawa to Port Arthur, and Edmonton to Yellowhead Pass.

- (a) to the Canadian Northern Ontario Railway Company, for a line of railway from the city of Ottawa, in the province of Ontario, to the city of Port Arthur in the said province; not exceeding 910 miles;
- (b) to the Canadian Northern Alberta Railway Company for a line of railway from the city of Edmonton, in the province of Alberta, to the boundary of the province of British Columbia at or in the Yellowhead Pass; not exceeding 260 miles.

How  
subsides  
shall be paid.

3. The subsidies hereby authorized shall be payable out of the Consolidated Revenue Fund of Canada and may, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows;—

- (a) upon completion of the work subsidized; or,
- (b) by instalments, on the completion of each ten-mile section of the railway; in the proportion which the cost of such completed section bears to that of the whole work undertaken; the cost for the purpose of this paragraph to be determined by the Governor in Council; or,
- (c) upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,
- (d) with respect to (b) and (c), part one way, part the other.

Time for  
construction  
of railway  
limited.

4. The lines, for the construction of which subsidies are hereby granted, shall be completed within a reasonable time, not to exceed three years from the first day of August, nineteen hundred and thirteen, to be fixed by the Governor in Council, and shall also be constructed and completed to the satisfaction of the Governor in Council.

Conditions  
as to  
running  
powers.

5. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways hereby subsidized; provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council as he deems just and proper.

Transporta-  
tion of  
Government  
supplies, etc.

6. The Companies receiving subsidies under this Act, their successors and assigns, and any person or company controlling or operating the railways or portions of the railways subsidized under this Act, shall each year furnish to the

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the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the Department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in and toward the payment of such charges the Government of Canada shall be credited by the company with a sum equal to three per cent on the amount of the subsidy received by the company under section 1 of this Act and on the amount of the subsidy up to six thousand four hundred dollars per mile received by the Company under section 2 of this Act.

7. As respects the railways for which subsidies are granted by this Act, the company at any time owning or operating any of the railways shall, when required, produce and exhibit to the Minister of Railways and Canals or any person appointed by him, all books, accounts and vouchers showing the cost of constructing the railway, the cost of operating it, and the earnings thereof. Books to be produced.

8. No subsidy shall be granted under this Act unless and until there shall have been issued and transferred upon the books of the Canadian Northern Railway Company to the Minister of Finance and Receiver General of Canada, in trust for His Majesty, shares in the common stock of the Canadian Northern Railway Company of the par value of seven million dollars, which said stock and all rights appurtenant thereto shall be held for the benefit of His Majesty absolutely, and shall be deemed to be fully paid up, non-assessable and not subject to calls; provided that the said stock or any part thereof may be disposed of under the authority of Parliament upon such terms and conditions as it may determine and the proceeds of the sale thereof paid into the Consolidated Revenue Fund of Canada. Transfer of stock to Crown.

9. The Canadian Northern Railway Company is hereby authorized and empowered to issue and transfer to the Minister of Finance and Receiver General of Canada, in trust as aforesaid, from and out of the authorized capital shares of its common stock of the par value of seven million dollars fully paid up and non-assessable and not subject to calls as aforesaid, upon the consideration of the Governor in Proviso.

Council

Issue of stock in return for subsidies.

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Council undertaking to grant to the Canadian Northern Ontario Railway Company and the Canadian Northern Alberta Railway Company the subsidies referred to in section 2 of this Act upon the terms aforesaid, and such stock when so issued and transferred shall be deemed fully paid without further or other consideration.

## 3-4 GEORGE V.

## CHAP. 46.

An Act to authorize the granting of Subsidies in aid of the construction of the railways and bridge therein mentioned.

[Assented to 6th June, 1913.]

HIS Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Railway Subsidies Act, 1913.* Short title.

2. The Governor in Council may grant a subsidy of Subsidies for railways. \$3,200 per mile towards the construction of each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), which shall not cost more on the average than \$15,000 per mile for the mileage subsidized, and towards the construction of each of the said lines of railway, not exceeding the mileage hereinafter stated, which shall cost more on the average than \$15,000 per mile for the mileage subsidized, a further subsidy beyond the sum of \$3,200 per mile of fifty per cent on so much of the average cost of the mileage subsidized as is in excess of \$15,000 per mile, such subsidy not exceeding in the whole the sum of \$6,400 per mile:—

1. To the Margaree Coal and Railway Company, Limited, for the following lines of railway:—

(a) from a point on the Intercolonial Railway near Orangedale to St. Rose; not exceeding 46 miles;

(b) from a point on the Intercolonial Railway near McIntyre lake to Caribou cove, Port Malcolm, Richmond county; not exceeding 4 miles;

the said subsidies being granted in lieu of subsidy granted by chapter 51 of 1910, section 1, item 4; not exceeding 50 miles.

2. To the Northern New Brunswick and Seaboard Railway Company, for a line of railway from the Drummond Mines at Austin brook, a branch of the Nipisiguit river above Great Falls in the county of Gloucester to a point on the Intercolonial Railway where it intersects the branch line from Bathurst station to Bathurst Harbour, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 24; not exceeding 16.9 miles.

3. To the Tobique and Campbellton Railway Company, for a line of railway from Plaster Rock along the Tobique river to Riley brook, in lieu of subsidy granted by chapter 51 of 1910, section 1, item 15; not exceeding 28 miles.

4. To the St. John and Quebec Railway Company, for a line of railway from Andover to St. John, New Brunswick, exclusive of a railway bridge across the St. John river, at or near Mistake, and a railway bridge across the Kennebecasis river at or near Perry Point; in lieu of subsidy granted by chapter 48 of 1912, section 2, item 2; not exceeding 200 miles.

5. To the Lotbinière and Megantic Railway Company for a line of railway from a point at or near Lyster in Megantic county to a point at or near Lime Ridge in the township of Dudswell in the county of Wolfe, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 23, for a line of railway between the points above mentioned; not exceeding 60 miles.

6. For a line of railway from a point on the Canadian Pacific Railway at or near Scotstown or Megantic to the International boundary, in lieu of the subsidy granted by chapter 40 of 1907, section 1, item 19; not exceeding 35 miles.

7. To the Little Nation River Railway Company for a line of railway from a point between Thurso and Montebello on the line of the Canadian Pacific Railway, northerly, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 46; not exceeding 30 miles.

8. To the Erie, London and Tillsonburg Railway Company, for a line of railway from Port Burwell to London, passing through or near Vienna, Calton, Aylmer, Kingsmill and Belmont, in lieu of the subsidy granted by chapter 51 of 1910, section 1, item 37; not exceeding 35 miles.

9. To the Tillsonburg, Lake Erie and Pacific Railway Company, for a line of railway from Ingersoll north to a junction with the St. Mary's and Western Ontario railway at Embro, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 12; not exceeding 10.38 miles.

10. To the Canadian Pacific Railway Company, for a line of railway from Gimli to a point on the Icelandic river  
at

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at or near Riverton, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 39, for a line between the points above mentioned; not exceeding 30 miles.

11. To the Canadian Pacific Railway Company, for a line of railway from Moosejaw, in a northwesterly direction, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 40; not exceeding 123 miles.

12. To the Alberta Central Railway Company, for a line of railway from Red Deer to Rocky Mountain House, in lieu of the subsidy granted by chapter 63 of 1908, section 1, item 38; not exceeding 70 miles.

13. To the Kettle Valley Railway Company, for the following lines of railway:—

(a) from Merritt to Penticton Wharf; not exceeding 145 miles;

(b) from a point on the line between Merritt and Penticton Wharf, at or near Penticton, to Midway; not exceeding 135 miles;

(c) from a point on the line between Merritt and Penticton Wharf, about 25 miles south of Merritt, to a point on the Fraser river near Hope station; not exceeding 55 miles;

the said subsidies being granted in lieu of the subsidies granted by chapter 51 of 1910, section 1, item 42; not exceeding in all 335 miles.

14. To the Calgary and Fernie Railway Company for a line of railway from Michel or Sparwood, in a northerly direction via the headwater of the Elk river and Kananaskis Pass to a point at or near the city of Calgary, in lieu of the subsidy granted by chapter 48 of 1912, section 2, item 43; not exceeding 100 miles.

3. The Governor in Council may grant the subsidy hereinafter mentioned towards the construction and completion of the bridge hereinafter mentioned, that is to say:—

Subsidy  
for bridge.

To the Burrard Inlet Tunnel and Bridge Company towards the construction and completion of a bridge over the Second Narrows of Burrard Inlet, as authorized by chapter 74 of 1910, in lieu of the subsidy granted by chapter 48 of 1912, section 3, item 1; not exceeding \$350,000.

4. In this Act, unless the context otherwise requires, the expression "cost" means the actual, necessary and reasonable cost, and shall include the amount expended upon any bridge, up to and not exceeding \$25,000, forming part of the line of railway subsidized not otherwise receiving any bonus, but shall not include the cost of equipping the railway or the cost of terminals or the cost of right of way

"Cost"  
defined.

of the railway in any city or incorporated town; and such actual, necessary and reasonable cost shall be determined by the Governor in Council, upon the recommendation of the Minister of Railways and Canals, and upon the report of the chief engineer of the Department of Railways and Canals, certifying that he has made or caused to be made an inspection of the line of railway for which payment of subsidy is asked, and careful inquiry into the cost thereof, and that in his opinion the amount upon which the subsidy is claimed is reasonable, and does not exceed the true, actual and proper cost of the construction of such railway.

How  
subsidies  
shall be  
paid.

**5.** The subsidies hereby authorized towards the construction of any railway or bridge shall be payable out of the Consolidated Revenue Fund of Canada, and may, unless otherwise expressly provided in this Act, at the option of the Governor in Council, on the report of the Minister of Railways and Canals, be paid as follows:—

- (a) Upon the completion of the work subsidized; or,
- (b) By instalments, on the completion of each ten-mile section of the railway, in the proportion which the cost of such completed section bears to that of the whole work undertaken; or,
- (c) Upon the progress estimates on the certificate of the chief engineer of the Department of Railways and Canals that in his opinion, having regard to the whole work undertaken and the aid granted, the progress made justifies the payment of a sum not less than thirty thousand dollars; or,
- (d) With respect to (b) and (c), part one way, part the other.

Conditions.

**6.** The subsidies hereinbefore authorized to be granted to companies named shall, if granted by the Governor in Council, be granted to such companies respectively; the other subsidies may be granted to such companies as establish to the satisfaction of the Governor in Council their ability to construct and complete the said railways and bridges respectively; all the lines and the bridges for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August, one thousand nine hundred and thirteen, and completed within a reasonable time, not to exceed four years from the said first day of August, to be fixed by the Governor in Council, and shall also be constructed according to descriptions, conditions and specifications approved by the Governor in Council on the report of the Minister of Railways and Canals  
and

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and specified in each case in a contract between the company and the said Minister, which contract the Minister, with the approval of the Governor in Council, is hereby empowered to make. The location also of such subsidized lines and bridges shall be subject to the approval of the Governor in Council.

7. The granting of such subsidies and the receipt thereof by the respective companies shall be subject to the condition that the Board of Railway Commissioners for Canada may at all times provide and secure to other companies such running powers, traffic arrangements and other rights as will afford to all railways connecting with the railway and bridges so subsidized reasonable and proper facilities in exercising such running power, fair and reasonable traffic arrangements with connecting companies, and equal mileage rates between all such connecting railways; and the said Board shall have absolute control, at all times, over the rates and tolls to be levied and taken by any of the companies, or upon any of the railways and bridges hereby subsidized: Provided always that any decision of the said Board made under this section may be at any time varied, changed or rescinded by the Governor in Council, as he deems just and proper.

8. Every company receiving a subsidy under this Act, its successors and assigns, and any person or company controlling or operating the railway or portion of railway subsidized under this Act, shall each year furnish to the Government of Canada transportation for men, supplies, materials and mails over the portion of the lines in respect of which it has received such subsidy, and, whenever required, shall furnish mail cars properly equipped for such mail service; and such transportation and service shall be performed at such rates as are agreed upon between the Minister of the department of the Government for which such service is being performed and the company performing it, and, in case of disagreement, then at such rates as are approved by the Board of Railway Commissioners for Canada; and in or towards payment for such charges the Government of Canada shall be credited by the company with a sum equal to three per cent per annum on the amount of the subsidy received by the company under this Act.

9. As respects all railways and bridges for which subsidies are granted by this Act, the company at any time owning or operating any of the railways or bridges shall, when required, produce and exhibit to the Minister of Railways and Canals, or any person appointed by him, all books, accounts and

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and vouchers showing the cost of constructing the railway or bridge, the cost of operating it, and the earnings thereof.

As to  
Canadian  
steel rails.

**10.** The Governor in Council may make it a condition of the grant of the subsidies herein provided that the company shall lay the railway with new steel rails and fastenings made in Canada and shall purchase all materials and supplies required for the construction of the railway and bridges and the rolling stock for the first equipment of the railway, from Canadian producers, if such rails, fastenings, materials, supplies and equipment are procurable in Canada of suitable quality and upon terms as favourable as elsewhere, of which the Minister of Railways and Canals shall be the judge.

Mode of  
payment of  
certain  
railway  
subsidies.

**11.** Whenever a contract has been duly entered into with a company for the construction of any line of railway hereby subsidized, the Minister of Railways and Canals, at the request of the company, and upon the report of the chief engineer of the Department of Railways and Canals and his certificate that he has made careful examination of the surveys, plans and profile of the whole line so contracted for, and has duly considered the physical characteristics of the country to be traversed and the means of transport available for construction, naming the reasonable and probable cost of such construction, may, with the authorization of the Governor in Council, enter into a supplementary agreement, fixing definitely the maximum amount of the subsidy to be paid, based upon the said certificate of the chief engineer and providing that the company shall be entitled to be paid, as the minimum, the ordinary subsidy of \$3,200 per mile, together with sixty per cent of the difference between the amount so fixed and the said \$3,200 per mile, if any; and the balance, forty per cent, shall be paid only on completion of the whole work subsidized, and in so far as the actual cost, as finally determined by the Governor in Council upon the recommendation of the Minister of Railways and Canals, and upon the report and certificate of the said chief engineer, entitles the company thereto: Provided always—

- (a) that the estimated cost, as certified, is not less on the average than \$18,000 per mile for the whole mileage subsidized;
- (b) that no payment shall be made except upon a certificate of the chief engineer that the work done is up to the standard specified in the company's contract;
- (c) that in no case shall the subsidy exceed the sum of \$6,400 per mile.

## 3-4 GEORGE V.

## CHAP 53.

An Act to authorize the granting of Subsidies to the Government of the Province of Ontario in aid of the construction of the Temiskaming and Northern Ontario Railway.

[Assented to 6th June, 1913.]

WHEREAS the Government of the province of Ontario Preamble.  
has constructed a line of railway known as the Temiskaming and Northern Ontario Railway, from North Bay on the Canadian Pacific Railway, and at a junction with the Toronto line, so called, of the Grand Trunk Railway, to Cochrane on the Grand Trunk Pacific Railway, and several branches thereof, and has them under operation; and whereas the line of railway from North Bay to Cochrane makes a through connection for the Transcontinental Railway with Toronto, and also with Montreal and Quebec, and being, as such, a work of national and not merely provincial utility: Therefore His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Temiskaming and Northern Ontario Railway Aid Act.* Short title.

2. The Governor in Council may grant to the Government of the province of Ontario, in consideration of its having constructed each of the undermentioned lines of railway (not exceeding in any case the number of miles hereinafter respectively stated), a subsidy not exceeding \$6,400 per mile:—

Subsidies to Government of Ontario for construction of railways.

- (i) For the line of railway from North Bay on the Canadian Pacific Railway to Cochrane on the Grand Trunk Pacific Railway; not exceeding 252·8 miles.

(ii)

- (ii) For the following branch lines of railway:—
- (a) From Englehart to Charlton; not exceeding 7·8 miles;
  - (b) From Cobalt to Kerr Lake; not exceeding 3·9 miles;
  - (c) From Iroquois Falls to Timmins; not exceeding 33·2 miles;
  - (d) From Earleton to Elk Lake City; not exceeding 28·5 miles;
  - (e) From Iroquois Falls Station to Iroquois Falls; not exceeding 7·25 miles.

How  
subsidies  
shall be paid.

**3.** The subsidies hereby authorized shall be payable out of the Consolidated Revenue Fund of Canada at the option of the Governor in Council, and may be paid upon the certificate of the chief engineer of the Department of Railways and Canals as to the mileage constructed, in such manner and in such amounts, and subject to such conditions, if any, as the Governor in Council deems expedient.

Commence-  
ment of Act.

**4.** This Act shall come into force on a day to be fixed by proclamation of the Governor in Council published in *The Canada Gazette*.

PART X

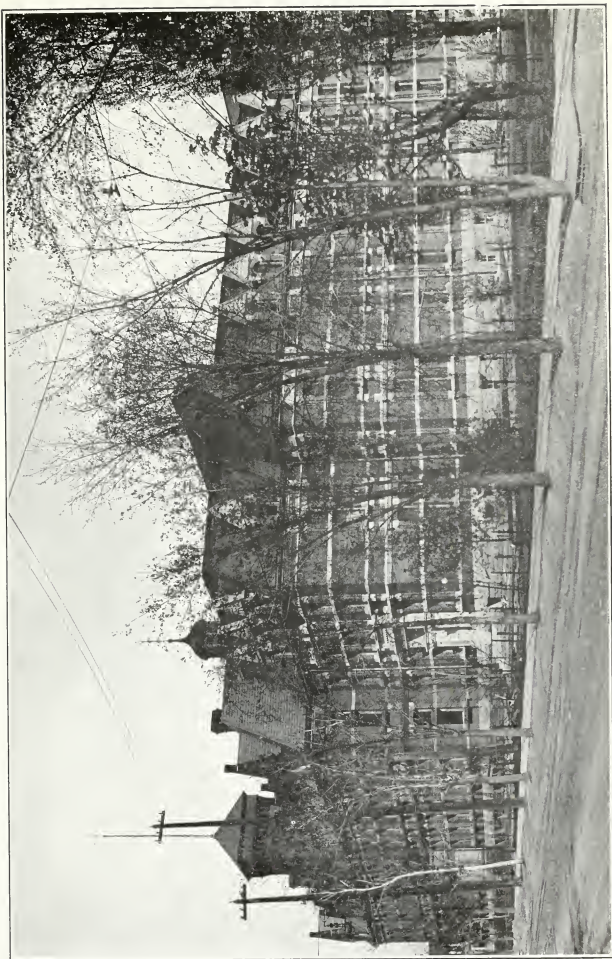
PHOTOGRAPHS, MAPS AND PLANS



## PHOTOGRAPHS, MAPS AND PLANS.

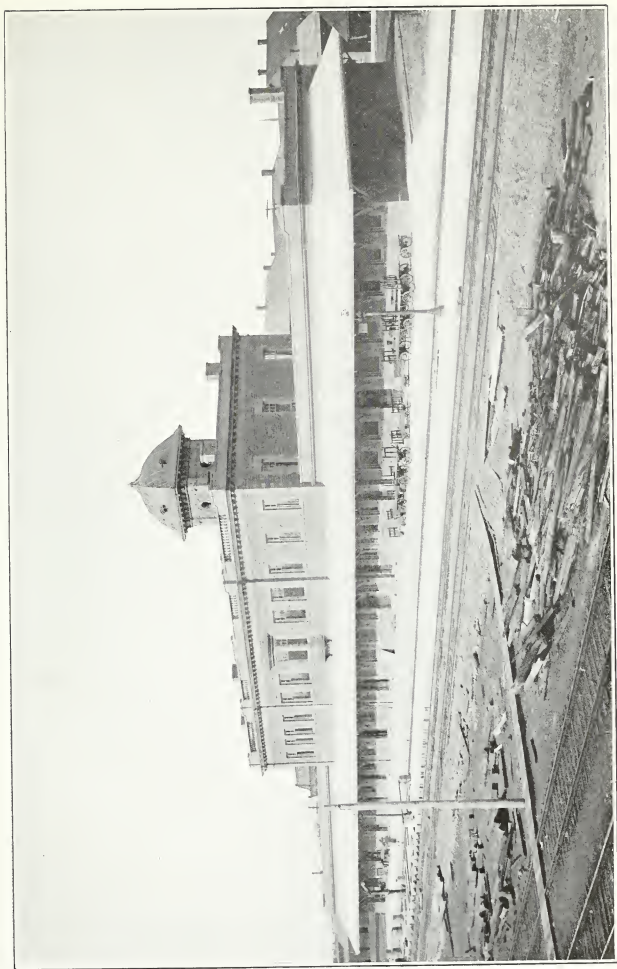
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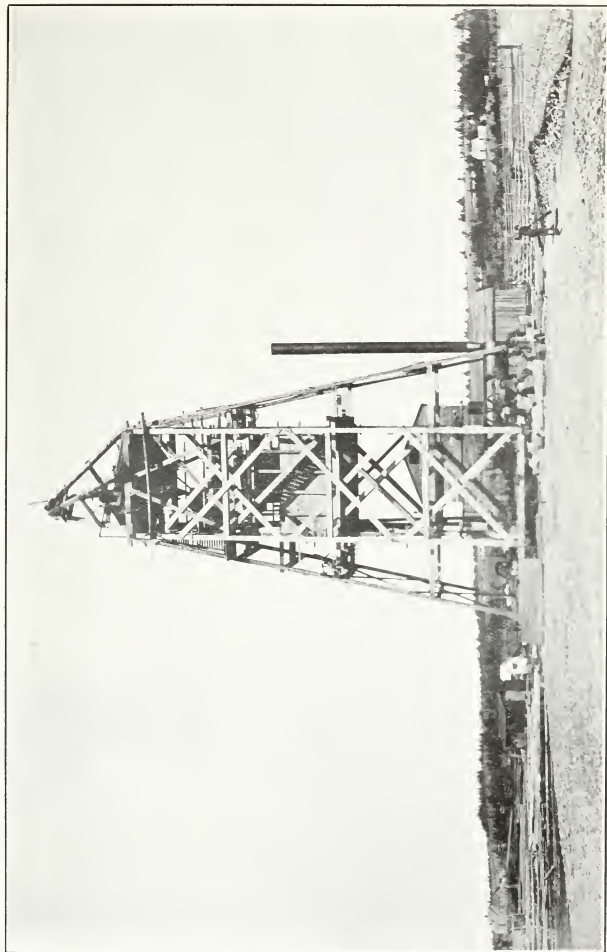
General Offices of the Intercolonial Railway at Moncton, N.B.





Intercolonial Railway—New Station Building at Truro, N.S.





I. C. R. Halifax Terminal.—Concrete mixing tower.





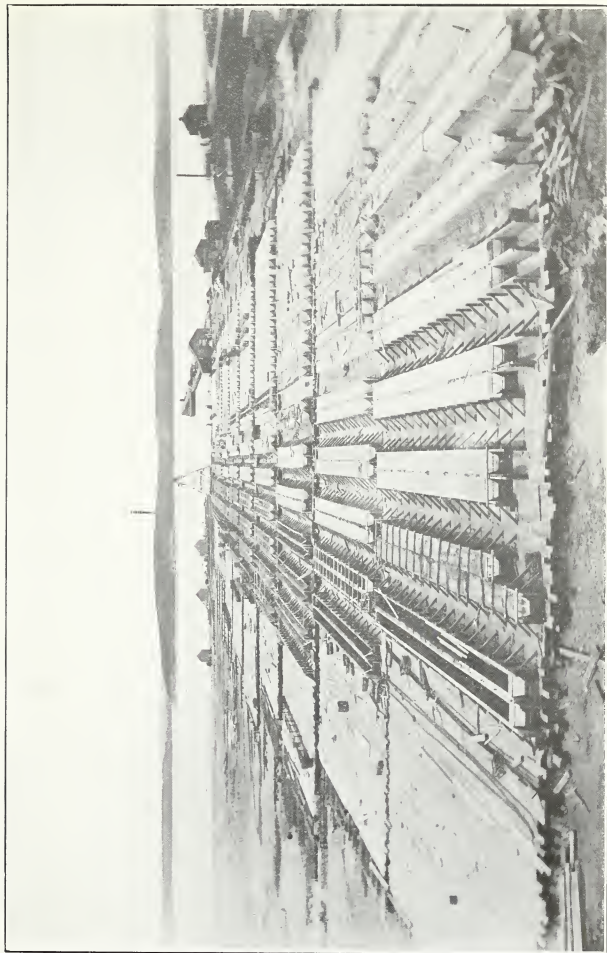
I. C. R. Halifax Terminals—Concrete mixing plant.





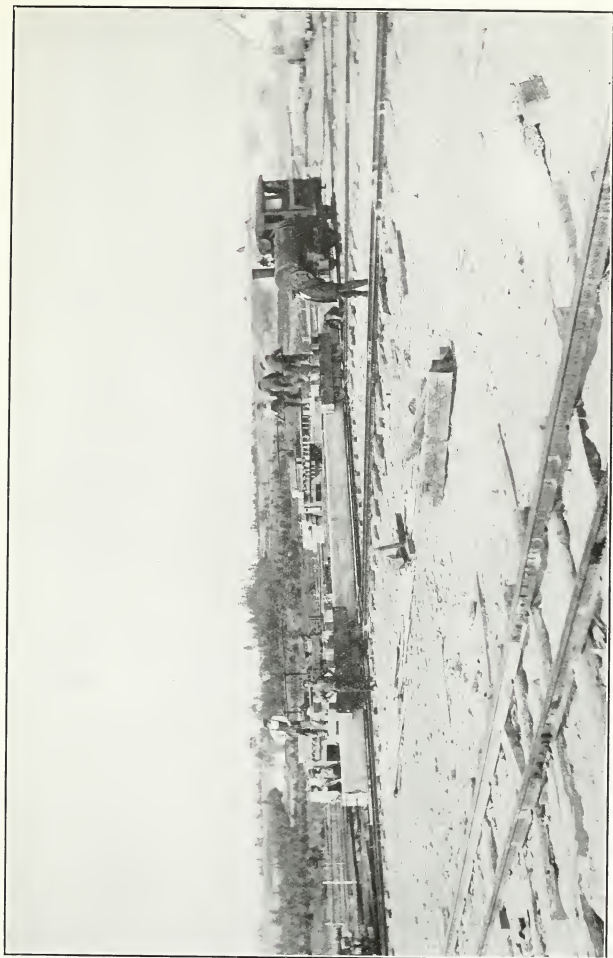
I. C. R. Halifax Terminals—Reinforcement for concrete piles.





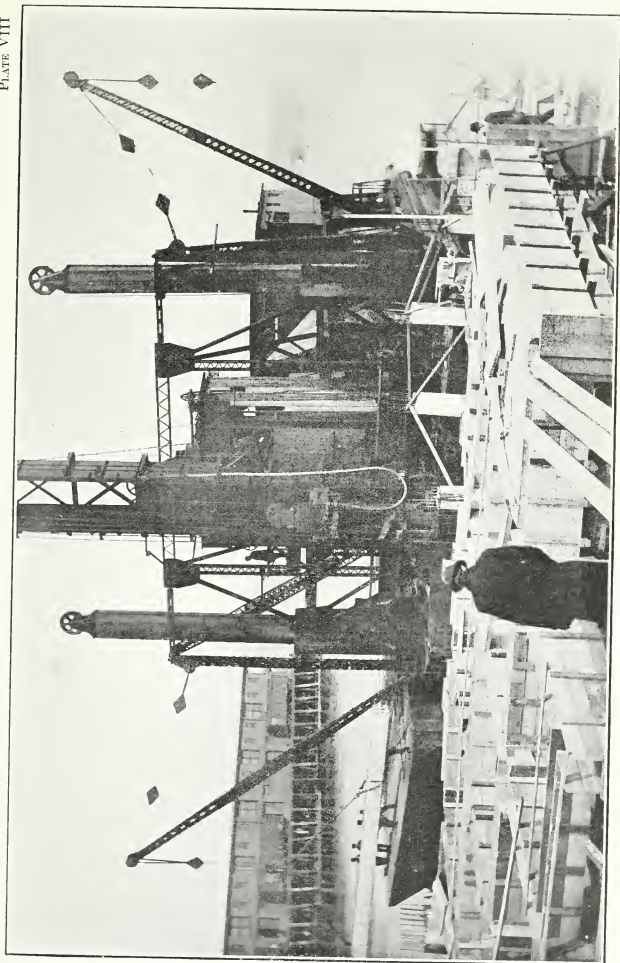
I. C. R. Halifax Terminals—Contractors' concrete pile making yard.





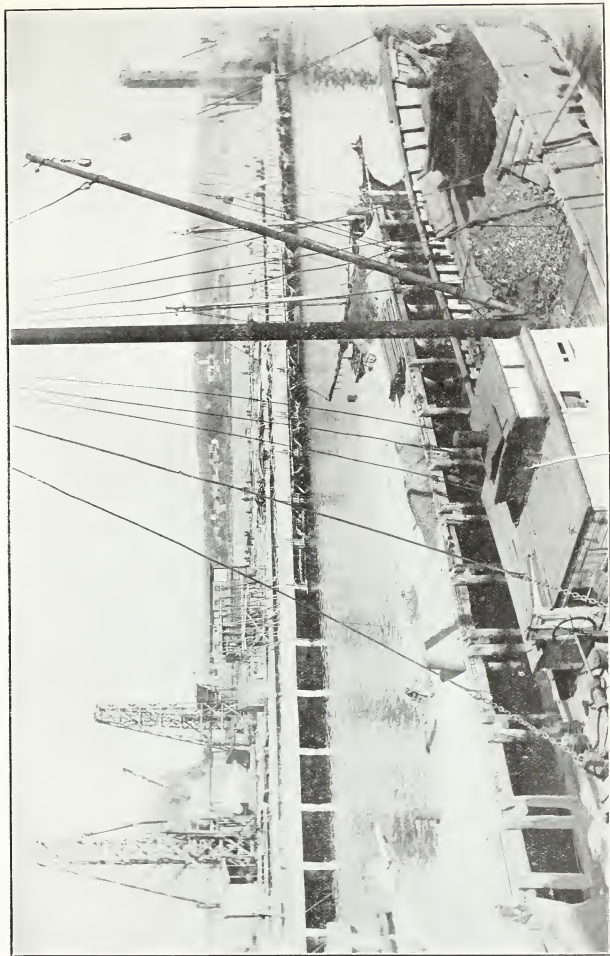
I. C. R. Halifax Terminals—Conveying concrete piles.





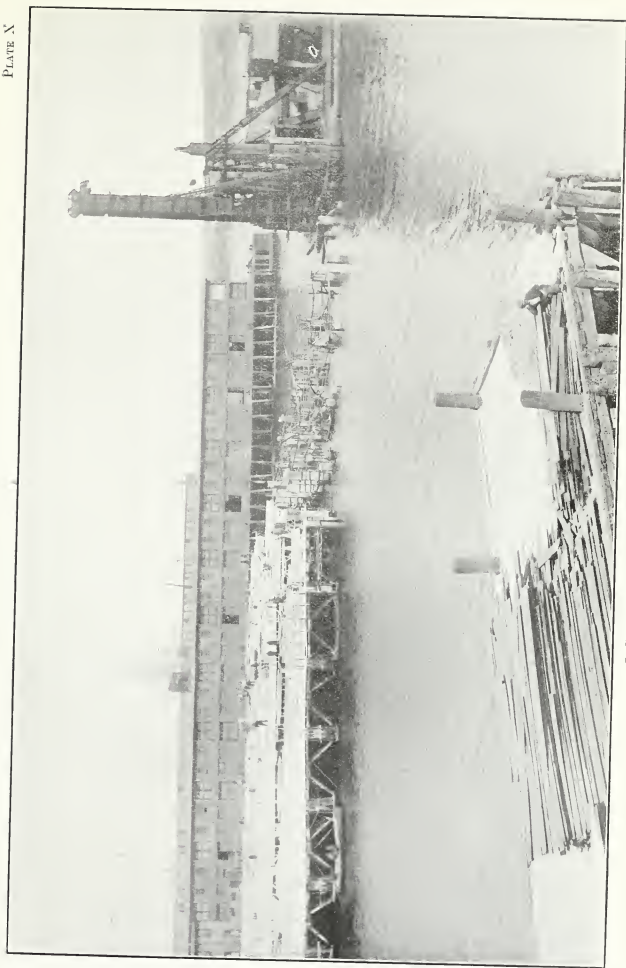
L. C. R. Halifax Terminals—Pile driving and form work.





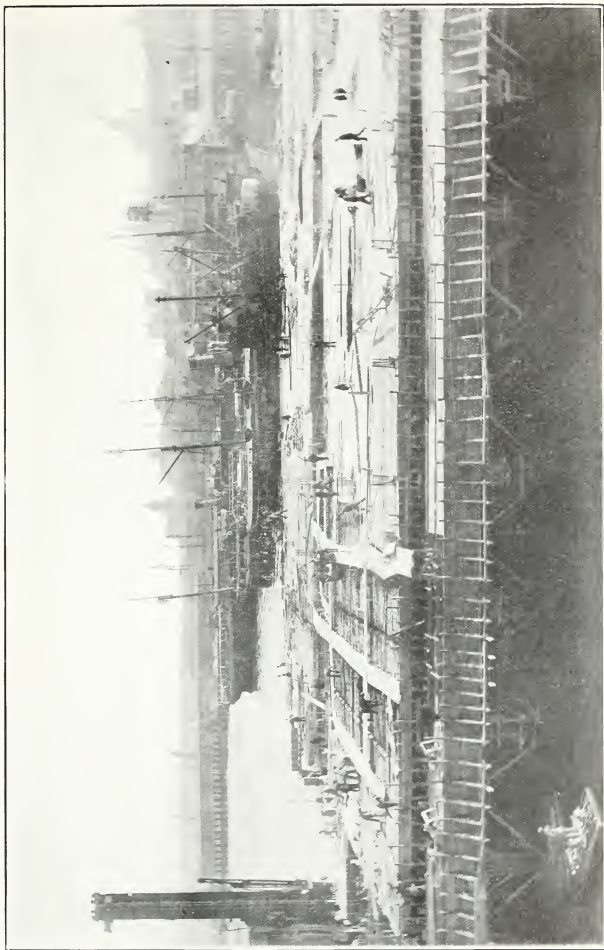
I. C. R. Halifax Terminals—View of pier, No. 2, looking north.





I. C. R. Halifax Terminals-- Pier No. 2, looking north.





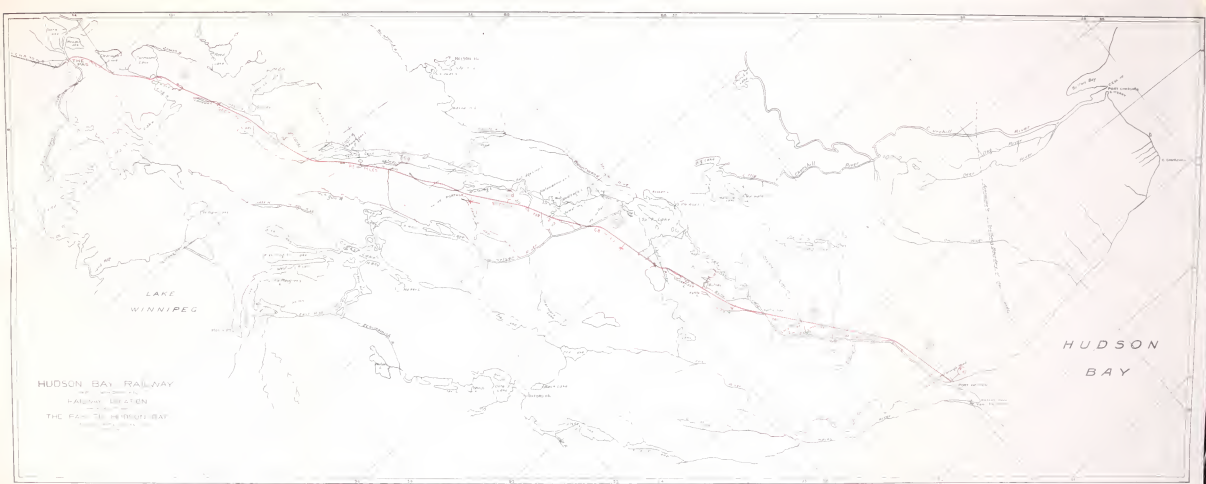
I. C. R. Halifax Terminals—Pier No. 2, looking south.



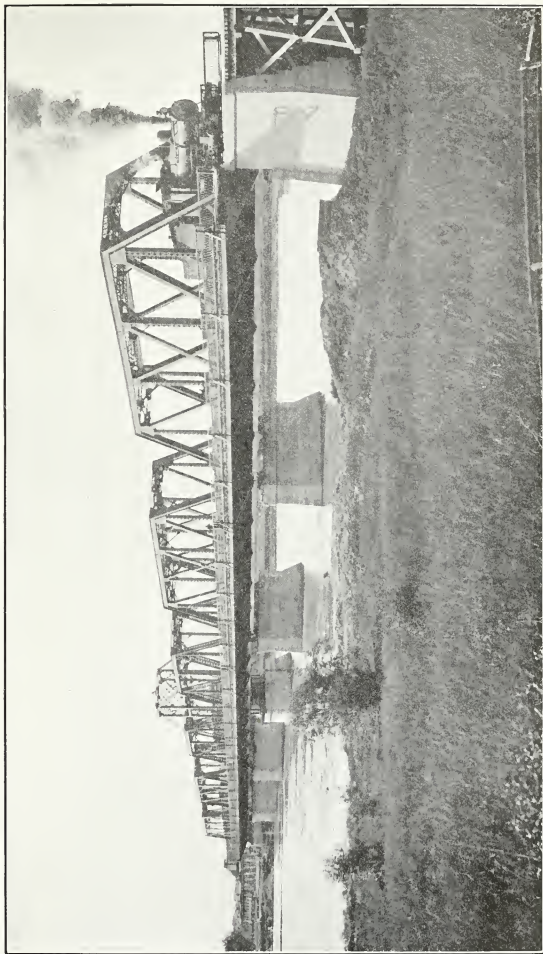
HUDSON BAY RAILWAY  
HALF-WAY LOCATION  
THE FAN TO HUDSON BAY

LAKE  
WINNIPEG

HUDSON  
BAY

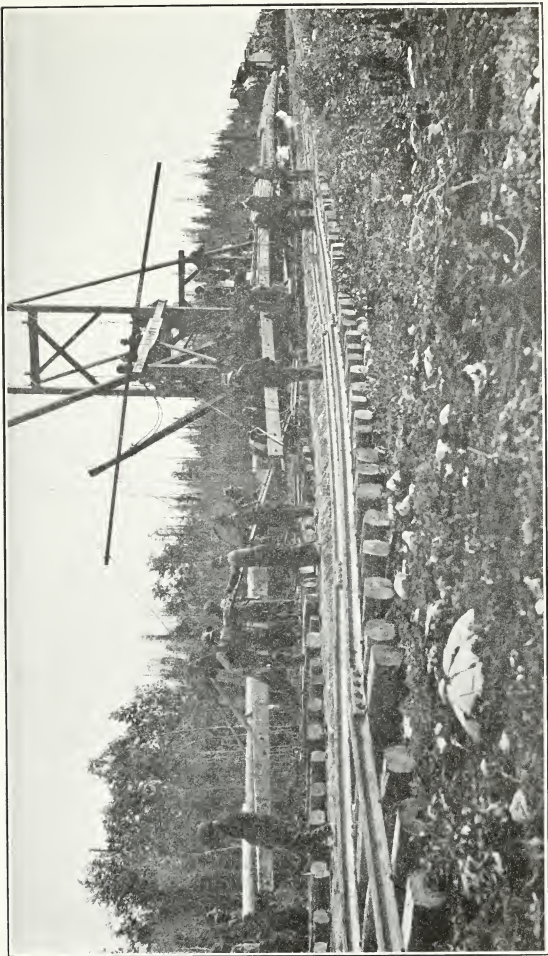






Hudson Bay Railway—Bridge across the River Saskatchewan at the Pas.





Hudson Bay Railway—Track laying from car.





Hudson Bay Railway—Log house camp Port Nelson.



Hudson Bay Railway—Dining camp, Port Nelson.





Hudson Bay Railway—Stovehouse at Port Nelson.





Hudson Bay Railway Material yard, Port Nelson.

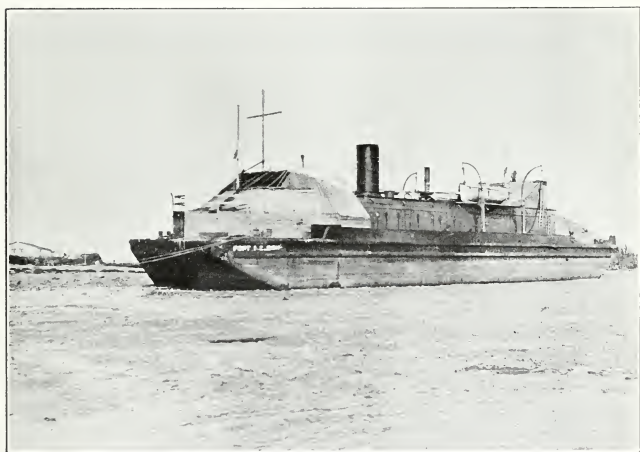


Hudson Bay Railway—Landing materials and supplies at the wharf, Port Nelson.



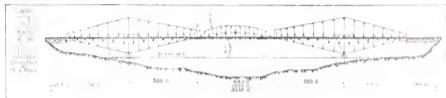


Hudson Bay Railway—Lighter at temporary wharf, Port Nelson.



Hudson Bay Railway—Suction dredge at Port Nelson, Hudson Bay.

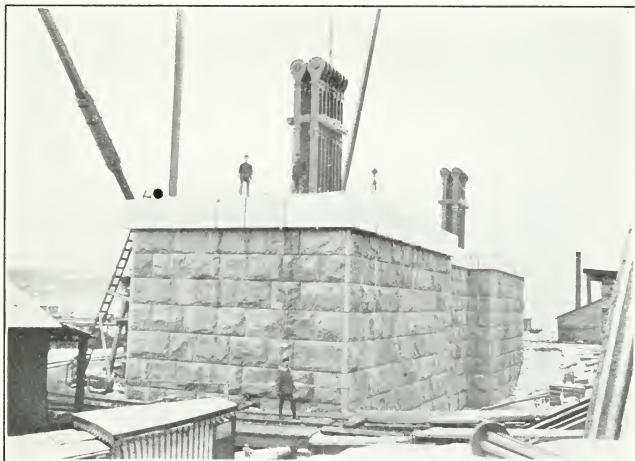








Quebec Bridge—General view of plant on south shore.



Quebec Bridge—North anchor pier, showing anchorage eye bars extending above pier.





Quebec Bridge—North anchor pier and plant about north main pier.

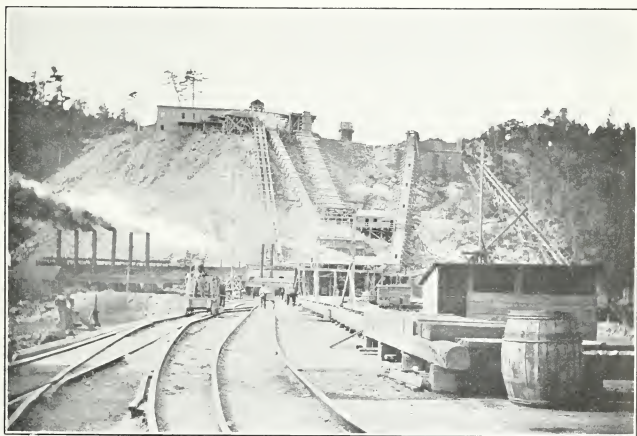


Quebec Bridge—North anchor pier and north intermediate pier.



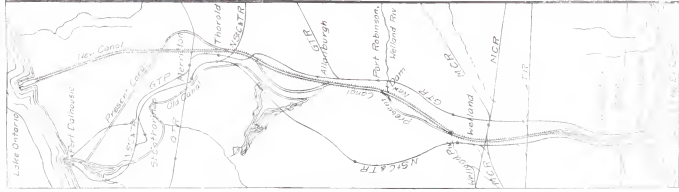


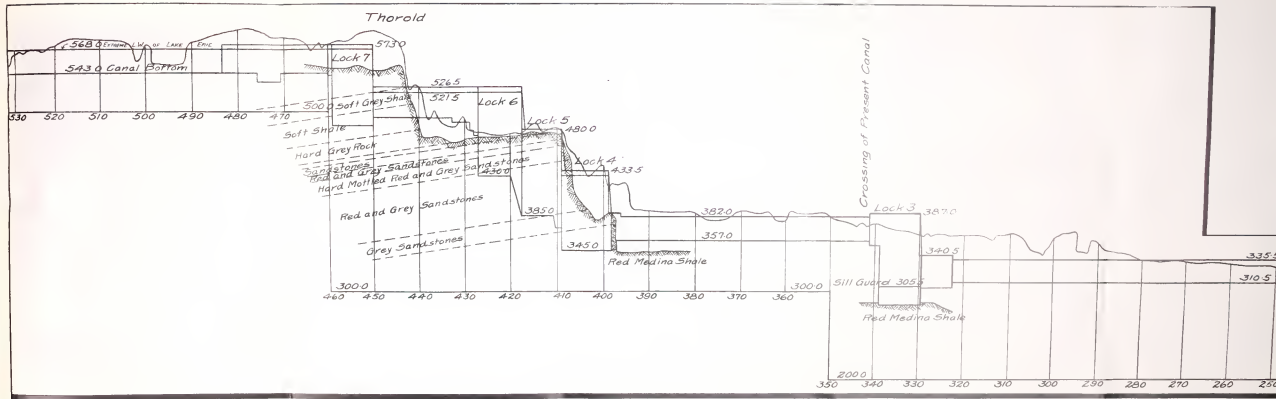
Quebec Bridge—North main pier in course of construction.



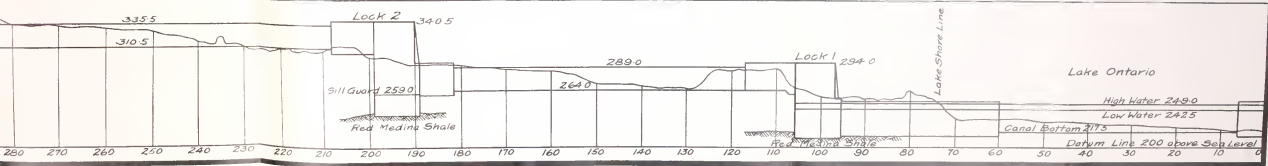
Quebec Bridge—Boiler, compressor and mixing plants, north side.





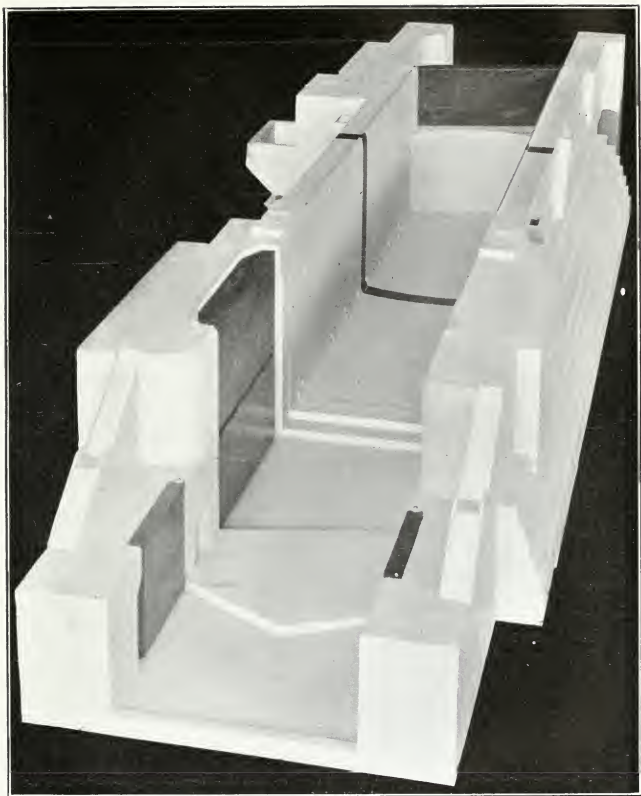


PROFILE OF LOCK SECTION OF NEW WELL



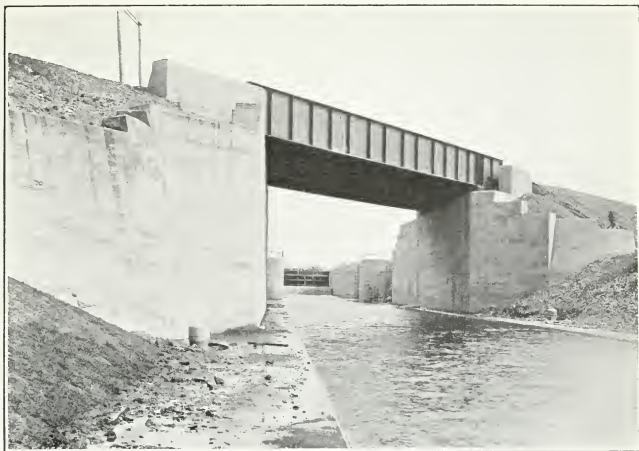
SECTION OF NEW WELLAND SHIP CANAL



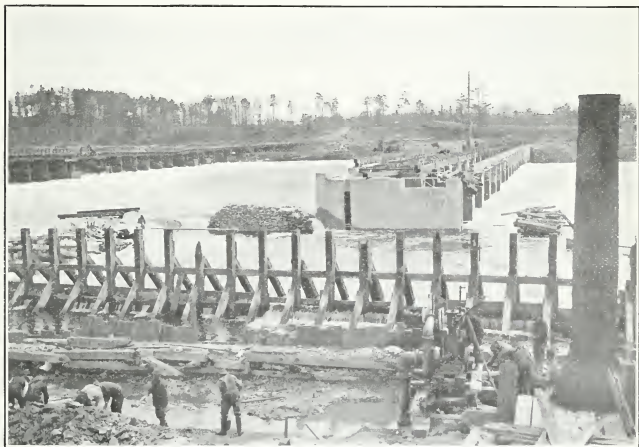


New Welland Ship Canal—Model of Lock No. 1, upper and lower entrances. The middle portion (460 feet) is omitted.





Trent Canal—G. T. R. bridge over canal at Trenton.

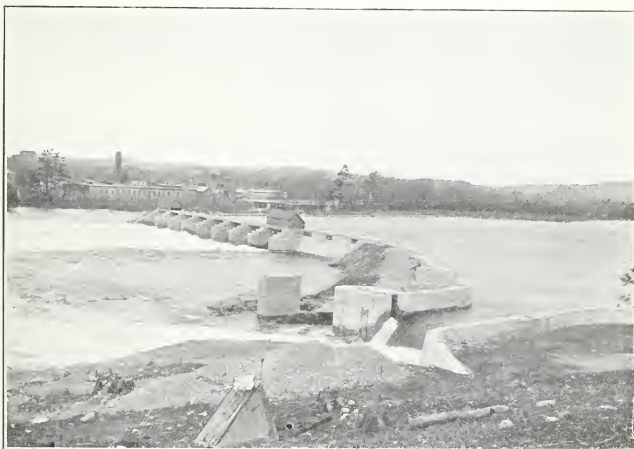


Trent Canal Dam No. 1, Ontario—Rice Lake Division.



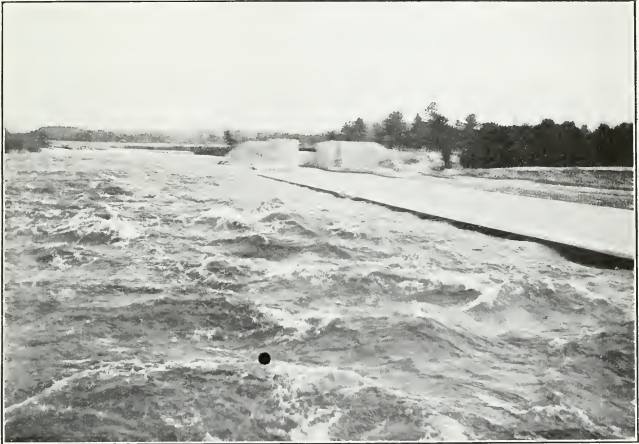


Trent Canal, Ontario—Rice Lake division dam 5, with coffer dam for power house.



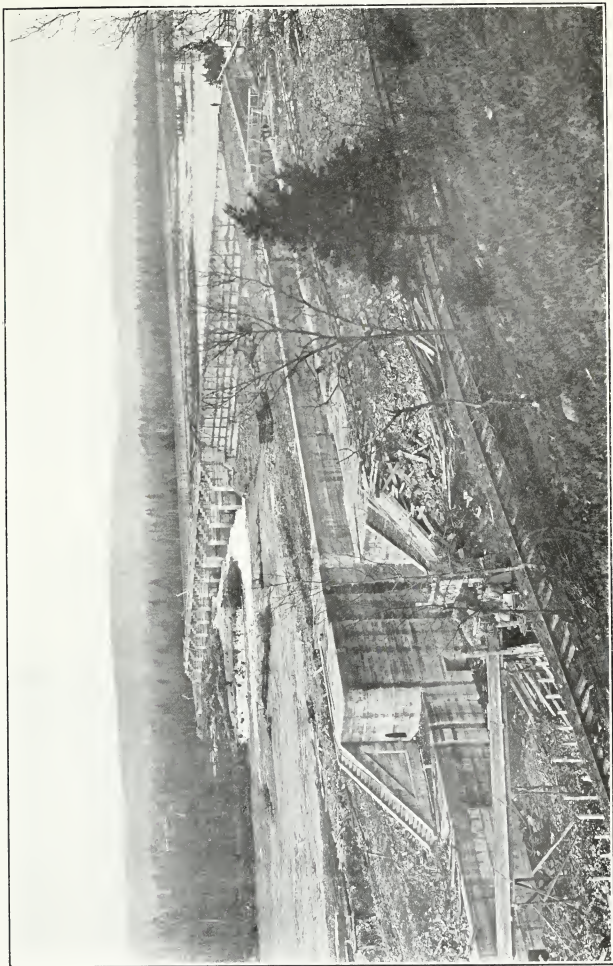
Trent Canal—Dam No. 6, Ontario—Rice Lake division.





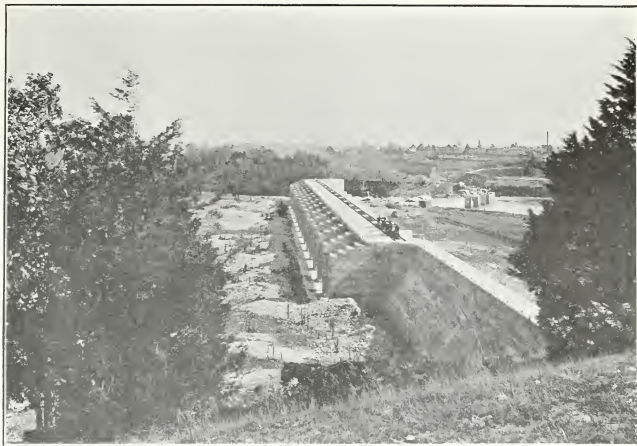
Trent Canal, Ontario—Rice Lake division, looking up stream at Lock No. 3, from Glen Miller bridge.



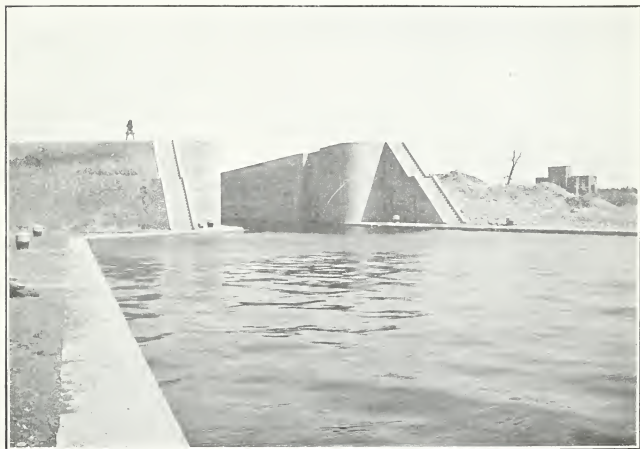


Trent Canal—Section 4, Ontario—Rice Lake division, Lock 8 and dam 9; under construction.





Trent Canal—Ontario Rice Lake division, section 6, looking south east at dam 14 Healey Falls is immediately below this dam.



Trent Canal—Lower entrance to Lock No. 13, Ontario—Rice Lake division.





Trent Canal Lower entrance to Locks 16 and 17, Ontario - Rice Lake division.

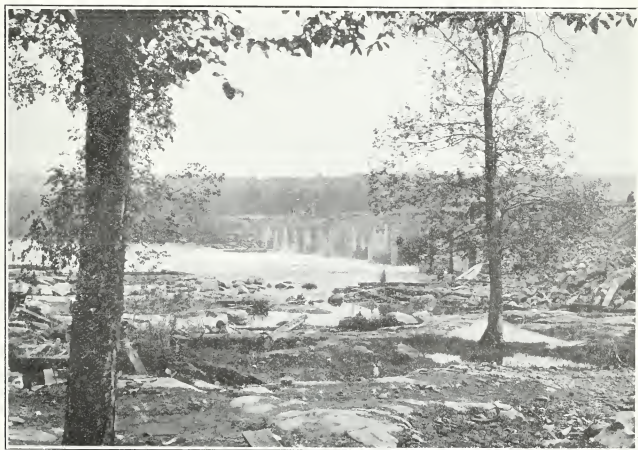


Trent Canal Lower entrance to lock at Hastings.





Trent Canal—Ontario—Rice Lake division, new dam at Hastings from north end of old dam.



Trent Canal—Down stream view of Burleigh Falls new dam.





Trent Canal—Lakefield—Balsam Lake division. Up stream view of new Burleigh Falls dam.



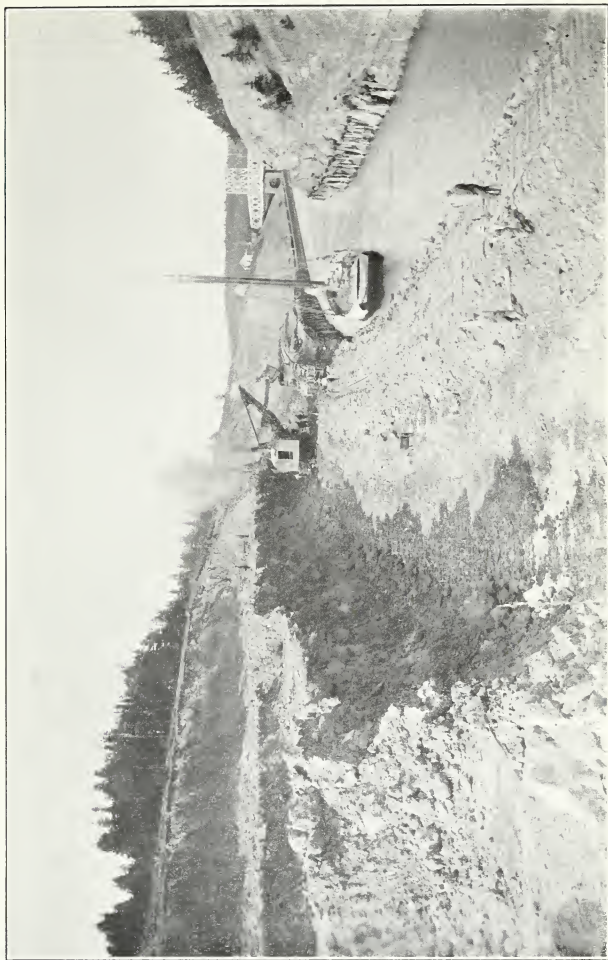
Trent Canal—Lakefield—Balsam Lake division, Burleigh Falls new dam, looking north.





Trent Canal—Crow River Weir. Submerged dam.





St. Peter's Canal, Cape Breton Works of improvement in progress.





Prince Arthur's Landing (now Port Arthur) Lake Superior. Arch erected on the wharf to welcome the Governor General, Lord Dufferin, in 1874.



Main street, Winnipeg, 1872. The third shanty on the right was the private office of the Provincial Attorney General.

